

The University of Chicago

CITYWARD MIGRATION
SWEDISH DATA

A DISSERTATION SUBMITTED TO THE FACULTY
OF THE DIVISION OF THE SOCIAL SCIENCES
IN CANDIDACY FOR THE DEGREE OF DOCTOR
OF PHILOSOPHY

DEPARTMENT OF SOCIOLOGY

1937

By
JANE MOORE

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO, ILLINOIS

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FOREWORD

THE distribution of population in various localities has always been important. It is even more significant today because of the ease with which people move by virtue of the new transportation inventions. These new inventions with centrifugal force are moving the people outward from the center of the city, and they are pulling them inward from the more remote regions toward the borderland of cities. With the closing of the gates at Ellis Island to the immigration stream from Europe, the towns and cities of the East and West are drawing away the surplus laborers, black and white, from the fertile South. Perhaps the inhabitants of the byways in the remote areas are moving down to live nearer the great paved highways that stretch on across the horizon to the market places of the world. Often a citizen lives and votes in one community and works in another, or his work may take him into many different places.

The movement of population within a country is thus seen to be very complex. We need to know more about it. Our knowledge of population has progressed farther about such phases of it as births, deaths, rates of increase, size of family, and occupations. But, despite the complexity of the problem of internal migration, all signs point to this subject as one which will increasingly engage the attention of social scientists in the near future. To deal with so complex a problem successfully, the subject matter must be broken down for special studies. The author has chosen one such field for inquiry, namely, the influence of the type of community of origin of the migrant in determining the selection of the place of his destination, and the role similarity of community environment plays in aiding adjustment to the new place of residence. The pursuit of this thesis opens up many interesting aspects of migration and hence is a study that will be welcomed by students in this field.

The author's demonstration is rigorous. To be such, it was necessary to have a large sample of statistical material on place of depart-

ture and place of destination. Such data are wanting in the United States. There is one country where they can be found, however. In Sweden the necessary material is available in the form of registration sheets which were, with the necessary labor, assorted into categories suitable for making the desired analysis. With these statistics the author was able to prove the thesis and thus contribute a discovery of exact and reliable knowledge about the pattern of migration not known before. This discovery will be useful for the sociology of population and will also be of practical value in the further scientific study of the subject in the United States.

Science grows by accretion. This research on cityward migration adds to the structure. Other researches on different segments of the field will be made as conclusively and definitively, it is hoped, as this one has been. Then our growing knowledge will prove of value in the planning of population which the modern world so greatly needs.

WILLIAM FIELDING OGBURN

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INTRODUCTION

WE CANNOT gauge by statistics the effect on the imagination of a country boy bred in the dull, if healthy, monotony of a sleepy rural district, of the strange stories poured into his ears by the wayfarer or the travelling showman from London, about the busy life and scenes of that wonderful city far away beyond the hills that bound his horizon. What an attraction, too, for the restless and unsteady spirit is the city which asks no questions, where old stories are buried and where the secrets of a doubtful past are safe: what a fascination for the ambitious is offered by the gigantic lottery of chances: what a refuge for the loafer is the 'paradise of odd jobs': what a hope for the impecunious is offered by the numberless doles and charities with which London abounds. Add to all this the contagion of number, the sense of something going on, the theatres and music halls, the brightly lighted streets and busy crowds;—all, in short, that makes the difference between the Mile End fair on a Saturday night, and a dark and muddy country lane, with no glimmer of gas and nothing to do. Who could wonder that men are drawn into such a vortex, even were the penalty heavier than it is?"¹

Although these lures of the big city for the country-bred youth cannot be gauged statistically, neither, for that matter, can many of the deterrents to cityward migration for the same country-bred youth if depicted in a manner similar to that in the quotation above. Nevertheless, when migration is studied statistically, the setup of such a study of migration will in part be determined by the relative weight given to the lures toward a locality, on the one hand, and the effect of established habits and general inertia to change, on the other. Therefore, to complete the one-sided picture of the attractive forces of the city acting upon the country population given in the foregoing quotation, the deterrents to cityward migration of the previous habits must also be imagined and presented.

¹ Charles Booth, *Life and Labour of the People in London*, First Series: "Poverty," III (London, 1902), 75.

Who knows, on the other hand, with what bewilderment the country-bred boy reacts to the tales and hearsay concerning the big city with its multiplicity of unfamiliar activities, its crowds of strange and harried faces, its labyrinth of streets hemming him in on every side with a variety of commerce and wares as ever changing as the people who pass him by? Who knows how, therefore, in reaction to such pictures of city life, he may dread to leave behind him the old familiar outline of hills, the oft-traveled country lane, the known round of daily chores upon the farm? However strong his desire to see beyond this familiar outline of hills, to widen his realm of experience, however great the drive to end the poorly paid, strenuous, and uncertain round of farm work, the pull of a similar pattern of life may be greater than that of a bewildering pattern of city life. Or, the people of the open country who want a change may choose a more familiar town life before going on to the strange life of the big city.

These speculative statements of the lures and deterrents to the change of residence to the city from the point of view of the country youth bring into focus an ever present problem in the study of migration. To what extent does the pull of economic possibilities and opportunities override the pull of habit and custom? How does each factor determine the direction of migration? Emphasis in migration studies has generally been upon the economic pull of the cities and the push from the agricultural districts rather than upon the sociology of habit. Any studies that have explored farther into this trend have done so in this general framework of economic pull. In fact, few studies have started with an entirely uneconomic viewpoint of the migration process. If one thinks of internal migration with no preconceptions concerning any possible directive forces, the movement of population within national boundaries would seem to a large extent a haphazard and random affair which has many stages. A recording of such movements might seem to have no intrinsic interest aside from the net result as affecting population redistribution. Therefore, if very detailed material were available, namely, data as to every move of every person from place of birth up to death, the many possibilities regarding tabulation make it apparent why there would be such a diversity in migration studies even when similar concepts were used.

Furthermore, migration is less spectacular now than in former times when whole tribes of religious sects moved away from one locality and started life anew. Even in later times the discovery of new farm lands or of areas of great mineral resources resulted in the movement of a great part of the population of towns and communities. Now in the twentieth century, with no new unsettled lands opening up and no spectacular economic possibilities, internal migration, at least, has become perhaps no less prevalent but less attributable to one specific cause. This tendency to attribute migration to a distinctly attractive force has, perhaps, led to a search for comparable and recognizable pushes and pulls upon which to hinge a study of population movements. Thus the emphasis upon the city in modern times as the pull for all internal migrants has come into a prominent place almost to the exclusion of all other types of migration studies.

Besides the more obvious push or pull for population movements previous to the industrial revolution, there is another factor in the modern migration process which differs from the former movements of whole communities or families, namely, the fact that migration is now principally a movement of single men and women on the lookout for a job—a movement away from the family group rather than with it. Thus in modern times it might be said that the family is, to a certain extent, the nucleus from which migration takes place rather than with which it takes place. Granting this assumption, migration in this century may be looked at as a spreading-out of single persons from birthplace or from the family nucleus. In which case, then perhaps, the type of community in which a potential migrant, moving as an individual without family, is born may be a factor of directive force in the subsequent destination of migration. As, indeed, it may have been in some degree with all types of migration—mass, community, or family—in the sense that the community of destination was similar in many fundamental respects to the community from which migration took place. The new community of residence may resemble that left behind in general physical environment and material development, or potentialities of such development, and consequently in types of occupations and general life-patterns.

This aspect of the problem of migration is generally disregarded

in favor of concentration on the forces which draw population to certain localities or the pushes operating to disperse population from a community. Therefore, studies of migration have explored the question of from what type of place migrants originate but not the further question of how this type of community of origin of migration was a factor in the subsequent destination of migration. The emphasis was rather upon the economic factors that seemed to be in part explanatory of the net result of population redistribution, that is, the growth of cities attendant upon the industrial revolution.

The study of the result of population redistribution has shown primarily a net loss of population from the agricultural districts and a net gain by the cities and industrial areas. A breakdown of these streams of migration into the origin and destination of single moves will obviously give more detail as to the intermediate stages in the process of migration to a city. Such a breakdown may deal, for instance, with such technical questions as origin and destination of migration, the effect upon this relationship of the distance migrated, the volume of in- and out-migration which results in the net loss or gain of population of different types of community, and the relationship of this volume to the fluctuations in the business cycle.

But apart from the more adequate description of the process of migration, continued refinement of migration data would be fruitful to the social scientist if the description suggested relationships between concepts, either new or old, for verification. The economist might find in sufficiently refined data basis for the verification of the hypothesis that some economic gain had resulted in the change of residence and that certain areas of a country drew in population because of this prospective gain. The social psychologist might find that the motive for this change in residence had been a desire for further improvement of the material, social, or personal well-being of the migrant whether realized or not. The social anthropologist might work on the hypothesis that much of the movement of population is related to the various social institutions, economic as well as other types, such as marriage customs, inheritance mores, etc. The sociologist might concentrate on the effect of the social and ecological background upon the behavior of a given population with

respect to migration, as he has done in studies of crime, delinquency, and family disorganization. An analysis of the process of migration from all these points of view would yield a very good picture of the relationships which may be explained by several concepts from the different disciplines and indicate those phenomena of migration which seem to fall without a particular conceptual system and need the analysis of one particular branch of social science. In so far as there is an overlapping in the predictions concerning migratory behavior from several conceptual systems, the study of migration is simplified. Where, however, this is not the case new insights may be gained into the migration process by an examination of those points where one system of approach is more valuable for prediction than another, on the criterion that fewer facts fall outside the scope of such a system.

In this study of migration, reported in the pages which follow, the approach is strictly sociological. The classification of communities used is taken as differentiating patterns of culture in the different localities. The community of birth of a migrant is assumed to be a predictive factor in the subsequent destination of migration on the basis that the place of birth is an index of the background of the migrant, which, in turn, is of significance in the probable direction of migration. This study shows how far one approach to the problem of migration is adequate in predicting the stages in the migration process and the adjustment of migrants to city life as related to the previous background of migrants for a limited universe. It also shows that there are other factors which must in the future be held constant to show the validity of the sociological principles involved. Further, this study should show the differences in predictions based on economic and sociological concepts and should indicate which concepts agree in their predictions with the data.

With these introductory ideas presented in a very general way, attention is next directed to the pages which follow, in which the concepts are more strictly defined, the hypothesis formulated in such a way that it can be measured, and the data presented upon which the proof rests.

CHAPTER I

THE PROBLEM AND ITS SETTING

INTERNAL migration has always been a factor in any study of population increase or decrease for areal units smaller than a national one. With the development of official statistics for all the western European countries over a sufficiently long period of time to allow for the study of trends, the remarkable and continuous growth of cities during the nineteenth century attracted the attention of many demographers.¹ This interest in the city as a separate demographic unit immediately brought into focus the relative importance of natural increase, internal migration, and foreign migration in population increase. As soon as the part of internal migration in the population increase of cities was recognized as the important factor in the continued increase of the population of cities, the areas of net loss of population through internal migration became equally important in a study of population redistribution. As the nineteenth century was one of rapid industrial development, the concentration of population in cities was immediately recognized as correlative to this general development and pointed to the agricultural districts as the areas from which the cities were drawing population. The picture of population redistribution was, therefore, of the push of population pressure and of economic changes in the pursuit of agriculture upon the population of agricultural areas, on the one hand, and the pull of ever increasing industrial demands for labor by the cities and other industrial areas, on the other hand.

With attention thus directed upon rural (i.e., agricultural) population as an important element in any city population through internal migration, the purely demographic interest in internal migration as a factor in population increase was supplemented by the study of the process of internal migration itself, as well as by the

¹ See, e.g., Adna Ferrin Weber, *The Growth of Cities in the Nineteenth Century* (New York, 1899); and Robert R. Kuczynski, *Der Zug nach der Stadt* (Stuttgart, 1897).

study of the type of migrant in respect to age, sex, occupation, education, etc., from the rural areas compared either to the rural population or to the city population. The early theory concerning the quality of the rural-born migrants assumed that the city drew the cream of the village youth and that the towns, where degeneration of population occurred, were continually replenished by this country migration.² However, in the early twentieth century, with the development of rural sociology and its connection with agricultural experiment stations, an interest and a technique arose for more detailed studies of the type of migrant leaving a farm community. Since official statistics are primarily collected for governmental purposes, governmental interest in nationality resulted in the tabulation of population by place of residence and birthplace and were the data on which demographic studies of internal migration were based. This type of material was obviously not pertinent to a detailed analysis of the problem of the selection of migrants from agricultural areas. The necessity of collecting primary material in order to throw light on this problem meant that the samples from which conclusions were reached were small, also the points of view and types of tabulation differed from study to study. The usual method was to study the offspring eighteen years and over of the first or second generation of farm owners or operators.³ The possible migrant offspring were then divided into three social classes, according to income of fathers, or according to whether fathers were owner-operators or tenant-farmers. Comparisons were then made as to destination of migrants, distance of migration, type of occupation entered after migration, age and sex, amount of education compared to that of possible migrants, and order of birth. The studies of

² See William Ogle, "The Alleged Depopulation of the Rural Districts of England," *Journal of the Royal Statistical Society*, LII (June, 1889), 205-32; also Charles Booth, *Life and Labour of the People in London*, Vol. III (1st ser.; London, 1902), chaps. ii and iii.

³ See, e.g., Wilson Gee, "A Qualitative Study of Rural Depopulation in a Single Township, 1900-1930," *American Journal of Sociology*, XXXIX (September, 1933), 210-21; Wilson Gee and John J. Corson, III, *Rural Depopulation in Certain Tidewater and Piedmont Areas of Virginia* ("University of Virginia Institute for Research in the Social Sciences, Institute Monograph No. 3" [1929]); and C. C. Zimmerman, "The Migration to Towns and Cities," *American Journal of Sociology*, XXXII (November, 1926), 450-55.

selection with regard to education⁴ show that, although the more highly educated migrate more frequently proportionately than the less well educated, the number of migrants from the less well educated make up the greatest proportion of all migrants; so that there is no indication that the highly educated alone are selected for migration. Similarly, the occupational classes entered by the children of farmers were related to the educational achievements of the migrants, the bulk of migrants from the lower classes entering the laboring class and the children of successful farmers entering the higher occupational classes. Studies of migration from a sociological point of view, that is, of the selection of migrants from different social, economic, and educational groups, were not able to establish a definite relationship between migration and membership in one particular social or economic group. The cream of the village youth, therefore, was not lost exclusively but all strata of the agricultural population with some selection of the children of more successful farm families or of tenant farmers, of second and subsequent born children of farmers, of females rather than males, and some indication of selection of the higher educated.

The study of the process of migration is concerned with the discovery of any fundamental regularities in population redistribution with respect to the type of place of origin and destination of migration, in the distance migrated and its relation to the type of place of origin and/or destination of migration, or to the type of migrant (as to whether a lone or family migrant). Since migration is generally assumed to be the result of economic forces, the common basis for the orientation of material pertinent to a description of the process of migration is a classification of the place of origin and destination of migration by an index of industrial development⁵ or stand-

⁴ See fifth annual report of the eugenics survey of Vermont, *Selective Migration from Three Rural Vermont Towns and Its Significance* (September, 1931); Thomas C. McCormick, "Urban Migration and Educational Selection: Arkansas Data," *American Journal of Sociology*, XXXIX (November, 1933), 355-59; Stanford R. Winston, "The Relation of Educational Status to Interstate Mobility," *Social Forces*, VIII (March, 1930), 380-85; and Wilson Gee and Dewees Runk, "Qualitative Selection in Cityward Migration," *American Journal of Sociology*, XXXVII (September, 1931), 254-65.

⁵ See forthcoming publication by D. S. Thomas in "Stockholm Economic Series."

ards of living.⁶ The more complete the information concerning the migrational history of a population, the more complete the resulting description of the process of migration will be, and the more specific the hypothesis to be tested. In general, from official census material the origin of migration is the county or state of birth (or some equivalent population unit), and the destination of migration is the county or state of residence at a given census. An analysis with this type of material of the process of migration was developed very completely by E. G. Ravenstein in his "Laws of Migration."⁷ His results showed that internal migration proceeded by stages from rural areas toward urban centers, the counties nearest an urban center contributing most migrants, since migration is, in general, for short distances. His statement that migration proceeded by short stages from rural areas to urban centers was one of deduction rather than demonstration from his material, since the statistics of birthplace and place of residence at a given time, a census-taking, give no indication of the successive stages of migration. In order to study the stages of migration from birthplace to residence at a given time, more detailed material concerning the migrational history of individual persons is necessary.

In the studies dealing with special material collected in the field for purposes of studying the selection of migrants from farm families, there is material on the distance of migration and the proportion of moves to urban centers. These studies bear out Ravenstein's contention that migration is generally for short distances and toward urban centers. With the accumulation of material concerning the process of migration, the statement that migration from rural areas proceeds by stages is made more concrete with regard to the probable types of places of residence in the successive stages, the general hypothesis being that the agricultural-born person first moved to a small village and then to a larger urban center, that is, the transition from country to city was a gradual one. This point of view has been explicitly stated by T. J. Woofter, Jr.,⁸ and by Sorokin, Zimmerman,

⁶ Carter Goodrich, W. Allin Bushrod, and Marion Hayes, *Migration and Planes of Living—1920-1930* (Philadelphia: University of Pennsylvania Press, 1935).

⁷ *Journal of Royal Statistical Society*, Vol. XLVIII (June, 1885), Part II.

⁸ *Negro Migration* (New York, 1920), p. 123.

and Galpin.⁹ The latter authors stated as a reason for this hypothesis that moves of short distances were the result of the necessity of a gradual adaptation to new environments on the part of the individual migrant.

Long-distance migration, however, has been found to be between urban areas and typical of the male rather than the female migrant. Drs. A. E. C. Hare and H. I. Michaels in Volume VI of the *New Survey of London Life and Labour*,¹⁰ in discussing the migration of population, come to the conclusion that since the turn of the century the urban-born from the industrial areas have tended to supplant the rural-born among the London in-migrants. Therefore, the conclusions regarding the type of birthplace and the type of place from which migration to urban centers takes place pointed more and more in the twentieth century to a gradual change in type of residence compared to type of birthplace for the agricultural-born, and to no change in type of place of residence in the migration of the urban-born. However, the net result of population redistribution was a loss of rural-farm population and a gain in urban population.

Actually, however, no great stress has ever been laid on the process of migration from the standpoint of the successive types of place of residence of the agricultural- or urban-born migrant to the city in factual studies of migration or, in fact, upon the number or proportion of all migrants to cities born in rural areas compared to those born in urban areas. The usual type of material available for the study of internal migration necessitated the study of net loss or gain of population and not the absolute number of in- and out-migrants producing the net gain or loss, and, therefore, demographic studies of migration emphasized the contrast between the loss of agricultural population and the gain in urban population through internal migration. At the same time migration has also been investigated from the rural sociologists' viewpoint, that is, of the type of person the farm population was losing to the city. So again the orientation of migration studies was in the field of rural-urban migration alone with no attempt at comparison as to amount or rela-

⁹ *Systematic Source Book in Rural Sociology* (Minneapolis: University of Minnesota Press, 1932), III, 518.

¹⁰ (London, 1934), chap. x, pp. 223-67.

tive importance of this type of migration compared to urban-urban migration.

A thoroughgoing analysis of internal migration as to the destination of migration is available in the Swedish system of population registration,¹¹ where annual population summaries as of the last day of the year give the total number of in-migrants as well as of out-migrants for each community (the smallest population registration unit). The material thus available in the Swedish Central Statistical Bureau makes possible an analysis of the total streams of migration resulting in a plus or minus balance for community groups classified as to degree of industrial development. A preliminary report of the analysis of such materials¹² reveals the enormous amount of in- and out-migration to and from various types of communities resulting in a net loss or gain of population. This note by D. S. Thomas also states that, although the migration balance and the business cycle are closely related, the streams of migration underlying the net loss of population by agriculture or gain by towns and Stockholm are very extensive even in years of depression. When the origin and destination of a single move are given as in the material collected by D. S. Thomas with regard to eleven selected Västmanland County communities,¹³ and the community of destination and origin are classified according to the degree of industrial development, the number and proportion of interchange moves (moves between communities similarly classified) could not fail to attract attention. The fact that migration between similarly classified communities should seem remarkable is undoubtedly the result, as before mentioned, of the restrictions on the knowledge of the process of migration imposed by the type of statistical material available to studies of net gain or loss of population and the consequent emphasis of the rural-urban trend. The Swedish material on internal

¹¹ For a description of the Swedish system of population registration see D. S. Thomas, "Economic and Social Aspects of Internal Migration," in *Economic Essays in Honor of Wesley C. Mitchell* (New York, 1935), pp. 451-52, or K. A. Edin and E. P. Hutchinson in *Studies of Differential Fertility in Sweden* (London, 1935), pp. 18-21.

¹² D. S. Thomas, "Internal Migrations in Sweden: A Note on Their Extensiveness as Compared with Net Migration Gain or Loss," *American Journal of Sociology*, XLII (1936), 345-55.

¹³ Economic and Social Aspects of Internal Migration," *op. cit.*, pp. 452 ff.

migration has, therefore, opened up the field of the process of migration and seems to call for a reconsideration of the fundamental assumption of previous studies of migration, namely, that the rural-urban stream of migration is the predominant and all-important factor in population redistribution. The streams of migration to and from communities classified according to their industrial development may be increased or decreased by economic push or pull and population pressure, but a hypothesis concerning the possible regularities to be found in the relation of the destination of migration to the origin of migration may not necessarily need to take into account only these factors as significant variables.

Let it be granted that the underlying causation of internal migration is population pressure plus economic push and pull, that the net gain or loss of population is best explained in relation to economic development, and that the amount of net gain or loss of population varies with the fluctuations in the business cycle. There are, then, the two phases of migration: the type of migrant and his selection and the process of migration that do not necessarily fall into this demographic and economic framework. Although the problem of the selection of migrants has been attacked by rural sociologists, the problem of the process of migration has not been approached in any detail from a sociological viewpoint. Internal migration may not be a process merely to be described as related to certain economic and demographic developments but may be a process which is fundamentally related to factors of environment. Therefore, when the environment of the place of origin and destination of migration has been classified on some common basis for a group of migrants, the process of migration thus revealed may display certain regularities predictable on sociological principles concerning the effect of environment on behavior and give validity to these principles for predictions as to the process of social change in other fields.

One aim of a science of sociology is to be able to predict the direction and extent of changes in behavior as the result of the introduction of new factors in a situation. This would make it possible ultimately to have some basis for the planning of the control of human behavior. However, in order to predict changes in behavior as the

result of the introduction of new factors in a situation, it is necessary to have a knowledge of how persons usually behave in a given situation before the new factor was introduced. Only then is it possible to relate the usual behavior and the change in this behavior to give some idea of the process of the change in human behavior. The problem, therefore, in a study of the process of migration is to see whether some hypothesis can be formulated that will predict the relative importance of different migration streams; so that, upon this basis, plans for diverting the streams may be related to the normal process of migration, and changes in the direction of the streams measured with relation to this normal migration process. And so, also, the process of social change in any field of human behavior is based upon a study of the usual distribution of behavior in that field, so that changes in the distribution may be measured and further predictions made upon a knowledge of this relationship.

Starting with the assumption that a population is born and lives in places which differ one from the other in type of industrial development and material environment, it has often been postulated that differences in environment lead to differences in behavior. Distinguishing, for the present purpose, three types of industrial development—agricultural, rural industrial, and urban—a certain proportion of any population is born in each of these three types of community. Among the persons born in any one of the three types of community there are a certain number of future migrants who in turn may be distributed by the process of migration to a community with a similar material environment or to one of two types of dissimilar material environments. Thus, from any one particular community type the migrants have three possible types of moves: is there any basis for predicting which, if any, type of move is the most frequent, that is, the usual mode of behavior? Since it is assumed that residence in the formative years of life in different types of material environment results in different sets of behavior patterns embracing many of the activities of the individual, the tendency in migration, therefore, might be to reach an environment where this set of patterns could be perpetuated. A particular environment need not produce a homogenous set of patterns, and, therefore, all types of moves are possible, but the type of move where the most frequent

behavior patterns may be used to best advantage is postulated as the most frequent type of move. The great proportion of interchange moves (i.e., between communities of the same type of material environment) as shown in the material of D. S. Thomas may be a reflection of this postulated tendency on the part of migrants to seek environments similar to that of the origin of their migration. Proportionately, then, to the population born in agricultural communities and moving, migration of the agricultural-born to a town would be less frequent than migration to another agricultural community. Likewise, proportionately to the population born in towns and moving, migration of the town-born to other towns would be more frequent than moves to agricultural communities. Migration of the agricultural-born to towns under such a hypothesis would not be the typical process of migration for the agricultural-born. Suggestions in previous studies of internal migration that direct moves from agricultural areas of the native farm population to cities did not appear to fit in with implicit assumptions concerning individual adjustments to new environments are found in the statements that rural-urban migration proceeded by stages and also in the attempt to account for this migration by the presence of rigorous selection of this migrant population compared to the native farm population. This postulation does not contradict the results found of a net loss of rural population to cities or the reverse trend in 1930 in the United States.

Following the implications of the hypothesis farther, if the first move of the agricultural-born is most frequently to another agricultural community, and the first move to a city most infrequent, then it is further postulated that the move of the agricultural-born to cities is a progressive process from villages or small industrial areas to towns, and then to cities. That is, the agricultural population which does break away from the circle of interchange migration does so gradually with relation to the type of environment of destination of migration compared to the environment of origin of migration. Therefore, looking back on the process of migration from a study of the type of place of origin of all migration (i.e., birthplace and type of place of previous residence of the in-migrant population of a large city, the agricultural-born would be expected to have

moved to the city from another town or industrial area most frequently, while the town-born would be expected to move more frequently directly from town of birth or indirectly from a town, and very infrequently from agricultural communities. The first part of this study of internal migration is directed at a verification of this hypothesis that the amount and process of migration to a city is related to the degree of industrial development of community of birth by a study of the population of Stockholm in 1930 born in Västmanland County, Sweden.

If it is shown that different degrees of industrial development of community of birth lead to different processes of migration to Stockholm and the process of migration is as postulated, then it should follow that, since the differences in behavior patterns have directed the course of migration, the immigrant population as found in Stockholm classified according to type of birthplace should continue to reveal differences in the distributions of certain types of behavior. Therefore, a comparison of these distributions of behavior should help to verify the assumption that different types of community produce different sets of behavior patterns which persist no matter what the subsequent type of environment. The second part of this study will deal with a comparison by type of place of birth of Stockholm residents born in Västmanland County with respect to education, income, civil status, and occupation in order to see whether the predicted differences in the distributions of these indices of behavior actually exist.

PART I

THE PROCESS OF MIGRATION TO STOCKHOLM

CHAPTER II

CONCEPTS AND DEFINITIONS: DESCRIPTION OF STATISTICAL MATERIAL

CONCEPTS AND DEFINITIONS

CLASSIFICATION OF SWEDISH COMMUNITIES¹

SWEDEN is divided for purposes of local administration and population registration into two distinct types of unit: rural communities (*landsbygd kommuner*) and towns. The laws for the administration of these two units are different, and the registration of population for towns of sufficient size is carried on by the several parishes within the town and not by a single pastor and his assistants as in the case of the rural community. These two types of unit are the smallest statistical unit for the tabulation of Sweden's official statistics. There are about 2,500 such units in Sweden—2,400 rural communities and about 100 towns, with Stockholm as a separate unit. The Swedish census up until the decennial census of 1930 made no attempt to establish population units of more demographic or economic significance, or to group the rural communities by a classification based on demographic or economic differences between these administrative units. As a result, Swedish economists and statisticians interested in economic or demographic problems dealing with these rural communities were faced with the problem of grouping these communities into relatively homogeneous classes. The first classification developed by Gustav Sundbärg in connection with his study of Swedish emigration² used as an index for a twofold classification the relative taxation value of agricultural

¹ For this description of the Swedish community system and the careful classification of the communities, I am indebted to Professor Gunnar Myrdal and associates of the Social Science Institute in Stockholm from whose forthcoming publication in the "Stockholm Economic Series" the descriptive material here presented has been taken; and to Professor Dorothy Swaine Thomas for introducing and making available to me this work and its materials.

² *Emigrationsutredningen* (Stockholm, 1910).

and "other" property. Rural communities were classified as agricultural unless the relative taxation value of "other" property was at least 20-30 per cent of the whole taxation value, in which case the community was classified as "other." Subsequent investigators refined this classification to give four types of rural communities. When Professor Myrdal, of the Social Science Institute in Stockholm, undertook a comprehensive study of the relationship of internal migration to the demographic and industrial development of Sweden during the period 1895-1930, the problem of a classification of rural communities was again present. The objective criterion for this classification was, as in most previous classifications, the relative taxation value of agricultural and "other" property. In the first rough classification communities with less than 15 per cent of the total taxation value in "other" property were classified as agricultural, communities with 15-35 per cent of the total taxation value in "other" property as "mixed," and all other communities as industrial (i.e., 35 per cent or more of total taxation value in "other" property). This preliminary classification was then modified on the basis of very detailed information collected for each community for the period 1895-1930. These separate community monographs contained material on total land area, amount of land under cultivation, size of land holdings; detailed information as to the number, kind, and size of all industries and the number of employees; and finally data as to the increase or decrease in population. The resulting threefold classification of rural communities was checked whenever possible with the previous classifications of other investigators. Each community was classified at three different dates—1904, 1914, and 1924. These three dates were considered representative of the economic and demographic changes of the three periods to be studied—1895-1904, 1905-14, and 1915-30.

Towns, the other type of administrative unit, are created by governmental action with consideration of hygienic and educational conditions, and other relevant factors such as density of population. So that, in general, towns may be regarded as communities of the highest industrial development, although the subclassification of towns as to the degree of industrialization developed by Professor

Myrdal will not be used in this study. The four types of Swedish communities to be used in this study are agricultural, rural "mixed," rural industrial, and towns.

THE CONCEPT OF A COMMUNITY RESULTING FROM THE
MYRDAL CLASSIFICATION

Since rural communities as administrative units developed mainly from the old church administrative areas, this basic population unit is far from homogeneous with respect to areal extent or population and its density within the same county (*län*) or from county to county. In the northern counties a community is very large with regard to areal extent and very sparsely settled. The Myrdal classification has, however, in general segregated communities of large areal extent and sparse population under the classification "agricultural"; and, as the classification indicates a more complex industrial development, so do the tests for population and its density, land under cultivation, etc., respond as would be expected. Nevertheless, since the community types were obtained by an economic index rather than by a demographic one, there is bound to be overlapping with regard to certain demographic facts between communities of different types. Therefore, the population unit—the community—of any particular type as here defined is not a strictly homogeneous unit in any respect.

THE CONCEPT OF CULTURAL LEVEL

Although a community is an administrative unit which has been classified by an index of the degree of its industrial development, each type of community resulting from this classification may be roughly thought of as representing a level of culture. Since there are four types of community distinguished by the classification, four levels of culture are assumed to be distinguished. The two types of community most dissimilar in degree of industrial development—the agricultural community and the city—are assumed to represent the differences in social organization which form the basic concepts in the fields of rural and urban sociology. The term "level of culture" is used not only to convey the idea of differences in social organization but also to emphasize the differences in material en-

vironment resulting from a classification of communities as to the degree of their industrial development.

Therefore, when migration from agricultural communities to Stockholm is under consideration, the movement of population between the two most divergent levels of culture is taking place, while the movement of population from towns to Stockholm is the interchange between two very similar levels of culture. The point which this study wishes to bring out is the relationship between the movement of population and the cultural level from which this movement originates. The movement of population between similar levels of culture is assumed the normal migration process and, between two widely divergent cultural levels, the atypical migration process. The cultural level, therefore, of the origin of migrants is considered to be a factor to be taken into account in the study of migration.

Migration may be thought of as consisting of a push, a pull, and a means. It is not taken for granted in this study that, where the push and pull exist, the means will take care of themselves. On the contrary, the means are here defined to consist of the habits and adjustments of a migrant as well as of the transportation facilities. And that, therefore, where the means for migration differ, so will the process and amount of migration. In migration from agricultural communities to Stockholm the poorest means are assumed to exist, while in migration from towns to Stockholm the best means of migration exist. Consequently, whatever the economic push and pull, the migration process should reflect these differences in means or cultural level and cannot be adequately understood without this concept.

DEFINITION OF "INTERNAL MIGRANT"

An internal migrant in Sweden is defined, by virtue of the system of registration of the change of residence of all persons, as a person who gives up his residence in one Swedish community to take up residence in another. Using the Myrdal classification of communities, there are the following different types of internal migrants:

1. Migrants between two communities of the same type or interchange migration.

2. Migrants between two communities of different types or noninterchange migration with the following subdivisions:
 - a) For migrants from agriculture all such moves are to communities of greater industrial development, or progressive.
 - b) For migrants from rural "mixed" communities, there is one possible type of move that will be regressive (i.e., to a community with a lesser degree of industrial development) and two possible types of moves that will be progressive.
 - c) For migrants from rural industrial communities there are two possible regressive moves for one possible progressive move.
 - d) For migrants from town three possible types of regressive moves, and no progressive moves unless towns are subclassified.

All that the definition of "internal migrant" given above has stated is that a person is an internal migrant when he has crossed an arbitrary administrative boundary. Not until these administrative units have been classified would the study of internal migration have any significant frame of reference. Even then the distinction between a migrant and a nonmigrant is not entirely clear. For a classification of places of residence produces two types of migrants: the person who changed his residence from one community to another of the same type and the person who changed his type of community of residence. A person who does not change his type of community of residence is not clearly differentiated from the person who moves within the boundaries of one community, since distance moved per se does not enter into the concept of an internal migrant, although an internal migrant alone can change his type of community of residence. However, since the whole study of internal migration gains meaning through the classification of communities, the two types of migrants resulting from such a classification should be taken into account and emphasis placed upon the difference between the two types or the reason for studying one type of migrant to the exclusion of the other type. To ignore the interchange migrant is to obtain only a partial picture of the whole process of internal migration. The concept of cultural levels and its relation to the process of migration would indicate that the interchange migrant may be found to play a much more important role in the redistribution of population than has formerly been thought.

THE STATISTICAL MATERIAL

The 1930 Swedish decennial census³ included for the first time a column for recording, in addition to the date and place of birth and place of residence as of December 31, 1930, the last place of residence previous to the 1930 residence and the date of establishing the 1930 residence. This additional information made possible the identification and classification of the types of community contributing migrants directly to Stockholm and comparison of the type of community of in-migration with the type of community of birth. It is this information which forms the basis for this study of the process of migration to a large city—Stockholm.

This study was limited to the 1930 population of Stockholm born in Västmanland County, Sweden. In view of the proximity of this county to Stockholm—the largest town of the county, Västerås, is fifty miles, as measured on the map, from Stockholm—a study of Stockholm residents born in this county (16,681) seemed at the beginning of the study to give an adequate statistical sample for tabulation and comparison, and further to simplify the task of the classification of communities of birth. Attention was focused on Västmanland County especially through the study of internal migration of eleven selected Västmanland County communities by D. S. Thomas, and the possibility of co-ordination of the two types of material.

Through the kind permission of the Folkkrakningsbyrå in Stockholm, two of the bureau's employees went through the census sheets and abstracted onto sheets very nearly replicas of the census sheets themselves the following information for all Västmanland County-born 1930 Stockholm residents: position in the household, main occupation in 1930 and 1925 and subsidiary occupation in 1930, date and place of birth, sex and civil status, date of marriage or dissolution of marriage, place and date of in-migration to Stockholm, amount of education completed 1930, number of children ever born (living and dead), income in 100 kronor, property in 1,000 kronor. For members of the household not born in Västmanland County, if any, the position in the household, place and date of birth, and place and date of previous residence were recorded. If the house-

³ The Swedish decennial census is compiled from the information required to be filled out every ten years when a census form is included with the yearly taxation form.

hold consisted of husband and wife, the occupation of the husband was recorded regardless of the county of his birth; likewise, the number of children ever born (living and dead) was recorded for every woman in the household whose husband was born in Västmanland County.

The *Statistisk årsbok för Stockholms stad—1934* gives the total number of Västmanland-born 1930 Stockholm residents as 16,681; the total number of Västmanland-born cases resulting from the abstracting of the census material was 16,302, or a loss of 2.3 per cent of all cases. Each one of the 16,302 cases with all information as given on the census abstract was transferred to a $6 \times 4\frac{1}{2}$ -inch filing card, each item of information being numbered to make for ease in sorting. The place of birth and place of in-migration were classified on the bottom of the card, occupation and date of birth were subsequently coded, and education was already coded on the census abstract sheets.

Before the abstracting of the census material for each of the eighteen parishes into which Stockholm is divided had been completed, it was noticed that information with regard to date and/or place of in-migration to Stockholm was lacking in many cases. The proportion of all cases incomplete in respect to either or both of these facts varied for the different parishes of Stockholm from 6 to as much as 18 per cent. A great many of these incomplete cases had been traced as to date of in-migration as far back as 1920 for purposes of the 1930 census. The fact that most of these residents had come into Stockholm previous to 1920 made it especially difficult to complete the information regarding date and community of in-migration. The card-file system of civil registration in a central bureau of the population of Stockholm was started in 1926. The system of civil registration before 1926 was carried on in large books in each of the thirty-four districts into which Stockholm was divided for this purpose. The community and date of in-migration were by this system only given in the district book of first residence. In order to trace a migrant, it was necessary, first, to find in the yearly name registers the year and district of first residence in Stockholm by working back from 1920 in these registers until the migrant's name appeared for the last time and then refer to the district's

registration book. For early in-migrants this system became extremely time-consuming. It took a month for one person working full time to complete 200 cases. When 560 of the incomplete cases had been traced and compared with the complete cases as to type of place of in-migration, no differences in type of place of in-migration were shown. Also tests as to possible selection of incomplete cases by income and type of place of birth gave no indication that a bias was introduced by the omission of the remaining incomplete cases, although there was a higher proportion of older persons among the incomplete cases than complete cases and of married persons rather than single adults or children. With this evidence as to the lack of significant bias by omission of incomplete cases and the laboriousness of completing the remaining 1,404 cases,⁴ no further cases were completed.

⁴ These 1,404 cases were incomplete in the following combinations of ways: (1) 1,227 had neither place nor date of in-migration recorded; (2) 82 had no place of in-migration but date recorded; (3) 95 had place of in-migration but no date recorded. One plus two equals 1,309 with no place of in-migration; one plus three equals 1,322 with no date of in-migration.

CHAPTER III

THE PROCESS OF MIGRATION AS SHOWN BY TWO TYPES OF STATISTICAL MATERIAL

FROM the 1930 Swedish census it is possible to tabulate the population born and living in Sweden in 1930 in a twofold table with birthplace and/or place of residence classified as either a rural community or a town by counties and for Stockholm, which is a separate unit.¹ The population living in community of birth is also given by counties and for Stockholm. Before taking up a sample of the population of a city in Sweden and studying the process of migration in detail, a proper perspective on the problem of the amount and extensiveness of population redistribution with respect to type of place of birth as compared to type of place of residence can be gained from the census tabulations described above not only for the total Swedish-born population but also for the Västmanland-born population living in Sweden in 1930. Since the emphasis is placed in this study upon the type of community of birth in the process of migration, it is especially pertinent to obtain a generalized picture of the proportionate shift in population with respect to type of place of residence of the rural-born compared to the urban-born.

Table 1 shows that the ratio of rural births to town births was as 3.4 is to 1; Table 2, as 4 is to 1. Although 3.4 times as many persons were born in rural communities as towns in all of Sweden, only 2.1 times as many persons were living in rural communities as towns. Similarly, Table 2 shows that for the Västmanland-born 1930 Swedish population 4 times as many persons were born in rural communities as towns, while about 1.8 times as many persons were living in rural communities as towns. There is a definite shift, therefore, of the Swedish population into towns. This net loss of the population of rural communities of Sweden to towns was the

¹ Sveriges officiella statistik: *Folkräkningen*, den 31 december 1930 av Statistiska Centralbyrån, del II (Stockholm, 1935), tab. 15 and 16.

CITYWARD MIGRATION

result of practically the same proportion of all rural-born residing in towns as of all town-born residing in rural areas, about one-fifth of the total born in each type of community residing in the other

TABLE 1

PROPORTIONS OF TOTAL POPULATION OF SWEDEN, DECEMBER 31, 1930
BORN AND/OR LIVING IN RURAL COMMUNITIES, TOWNS
COMMUNITY OF BIRTH, AND STOCKHOLM
(Total Population=6,079,817)

BORN IN	LIVING IN		TOTAL	LIVING IN	
	Rural Communi- ties	TOWNS		Community of Birth	Stockholm
Rural communities.....	63.23	14.06	77.29	38.45	3.38
Towns.....	4.50	18.21	22.71	15.91	1.34
Total.....	67.73	32.27	100.00	52.36	4.72

TABLE 2

PROPORTIONS OF THE TOTAL VÄSTMANLAND COUNTY-BORN 1930 SWEDISH
POPULATION BORN AND/OR LIVING IN RURAL COMMUNITIES
TOWNS, COMMUNITY OF BIRTH, AND STOCKHOLM
(Total Population=179,253)

BORN IN	LIVING IN		TOTAL	LIVING IN	
	Rural Communi- ties	TOWNS		Community of Birth	Stockholm
Rural communities... ..	59.13	20.64	79.77	29.35	6.42
Towns.....	4.67	15.56	20.23	9.62	2.89
Total.....	63.80	36.20	100.00	38.97	9.31

type of community. But in view of the greater number of rural-born as compared to the town-born the net gain in favor of towns amounted to approximately 580,000 persons. The proportionate net loss of the Västmanland County rural-born to towns was 1.6 times greater than for the whole of Sweden, that is, 16 per cent compared

to $9\frac{1}{2}$ per cent. The proportion of all the town-born living in rural districts and of all the rural-born living in towns was about 25 per cent, or one-fourth of the total in each case—a greater shift of population between the two types of community than for Sweden as a whole.

About 1 out of every 2 persons born in rural areas in Sweden was living in community of birth, while 1 out of every 1.6 persons born in towns was living in town of birth in 1930. For Västmanland County 1 out of 2.8 persons born in rural communities was living in community of birth, and 1 out of every 2 persons born in towns was living in town of birth. Therefore, the Västmanland County rural- and town-born were less likely to be living in community of birth in 1930 than the rural- and town-born population of Sweden as a whole.

Since the data in this study concern the Västmanland-born population living in Stockholm in 1930, what was the drawing power of Stockholm over the rural- and town-born? Was it in proportion to the chances of birth in the two types of place, that is, were there four times as many rural-born living in Stockholm as town-born or did Stockholm draw in the town-born out of all proportion to the chances of birth and survival (of death and emigration) to 1930? The proportion of the Västmanland-born population living in Stockholm in 1930 was 9 per cent, of which proportion $6\frac{1}{2}$ per cent were rural-born and 3 per cent were town-born, that is, 2.2 times as many rural-born persons were living in Stockholm as town-born. Therefore, while there were four times as many rural-born as town-born in the native Västmanland population living in Sweden in 1930, there were only twice as many rural-born as town-born of the native Västmanland population living in Stockholm in 1930. Thus there is not the expected ratio of four rural-born to one town-born as would be expected by chance in the Stockholm population but two rural-born to one town-born—a definite selection of the town-born. The proximity of Västmanland County to Stockholm undoubtedly accounts for the greater proportion of its native population living in Stockholm—9.1 per cent—compared to the proportion of the whole native Swedish population—4.5 per cent. What effect the distance of towns in Västmanland compared to rural communities has upon the rate of migrants will be taken up in chapter v.

The Swedish system of registration of all out-migrants from and in-migrants to each community supplies data as to the type of community of origin and destination of a single move. The census material presented above gave a cross-section at a given point of time

TABLE 3*

PROGRESSIVE, INTERCHANGE, AND REGRESSIVE STREAMS TO OR FROM ONE TOWN, VÄSTERÅS, AS PERCENTAGES OF TOTAL MIGRATION
STREAMS EXTENDING VARIOUS DISTANCES
(Total Migration Streams for Each Period and Distance
= In-Migrants+Out-Migrants)

TYPE OF COMMUNITY OF ORIGIN OR DESTINA- TION OF MIGRATION	PERCENTAGES OF TOTAL STREAMS EXTENDING VARIOUS DISTANCES					
	All Distances		At Least 10 Km.		50 Km. and Over	
	1895- 1904	1921-30	1895- 1904	1921-30	1895- 1904	1921-30
<i>Origin:</i>						
Agriculture.....	21.8	9.1	19.0	8.7	6.0	3.6
Rural industry.....	22.1	24.4	20.8	19.8	19.3	18.1
Towns†.....	16.7	15.9	19.7	20.2	26.0	23.7
<i>Destination:</i>						
Agriculture.....	8.5	6.8	7.5	6.6	3.8	3.3
Rural industry.....	12.4	22.5	11.2	17.8	11.1	16.9
Towns‡.....	18.5	21.3	21.8	26.9	33.8	34.4
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Number of cases.....	21,878	33,938	18,575	26,848	9,063	18,109

* The percentates in this table are taken from Table I in the article by D. S. Thomas, "Streams of Internal Migration: A Further Exploration with Swedish Data," *Rural Sociology*, II (June, 1937), 152-53.

† Includes moves from Stockholm to Västerås.

‡ Includes moves from Västerås to Stockholm.

of the continuous process of population redistribution measured from the origin of all migrations—birthplace. The material collected by D. S. Thomas on in- and out-migration for eleven selected Västmanland County communities for a thirty-six-year period, 1895-1930, presents a close-up of the process of migration with regard to a single move into or out of three types of community.

Table 3 presents the number of migrants into Västerås by type of community from which the move was made and the number of

migrants out from Västerås by type of community of destination of migration expressed as proportions of the total number of in-migrants plus out-migrants for each period and distance category.

Considering the in-migrants to Västerås during the period 1895-1904 from all distances, more than one-fourth of all the in-migration was interchange—from other towns to Västerås—or less than three-fourths of all in-migration was progressive, that is, from agricultural and rural industrial communities. When the less than 10 km. moves are eliminated, the interchange moves to Västerås increase to one-third of all in-migration in this same period. If all moves from less than 50 km. are eliminated, the proportion of all in-migrants from other towns increases further to one-half of all in-migration.

Comparing with these proportions the proportions of all out-migrants from Västerås which were to other towns during the same period for all distances, about one-half of all moves were to other towns including Stockholm. When less than 10 km. moves are eliminated, the moves to towns are still about one-half of all out-migration. But, when the moves of more than 50 km. are considered, the proportion of all moves from Västerås to other towns increases to two-thirds of all out-migration.

In other words, migration to Västerås during the period 1895-1904 was predominantly progressive, out-migration predominantly interchange. As the distance of communities from Västerås increases, the interchange moves from other towns increase from one-third to one-half; interchange moves from Västerås to other towns including Stockholm increases from one-half to two-thirds. Therefore, it seems that moves to Västerås were predominantly progressive moves from agricultural and rural industrial communities in this early period; moves from Västerås predominantly interchange with other towns.

In the latter period, 1921-30, the interchange moves of in-migrants increase in importance, owing to the falling-off of in-migrants from agricultural communities from all distances as well as for the two distance categories. But again, though to a less marked degree, progressive migration is greater than interchange migration for in-migrants to Västerås; interchange migration is greater than regressive migration for migrants from Västerås.

Therefore, although the years during which migration took place and the distance covered by the move do affect to some extent the proportions of interchange moves, by and large interchange migration is the greatest of all streams, migration to and from agricultural communities least, and migration to and from rural industry very nearly equal to interchange migration. Thus, the impression conveyed by this table is that the stream of migrants into and out of a town was to or from communities with some degree of industrial development.

TABLE 4*

PERCENTAGES OF TOTAL STREAMS OF MIGRATION TO STOCKHOLM FROM
THREE TYPES OF COMMUNITY IN VÄSTMANLAND
COUNTY, SWEDEN

(Total Migration Streams for Each Period = In-Migrants + Out-Migrants)

TYPE OF COMMUNITY OF MIGRATION TO STOCKHOLM	PERCENTAGES OF TOTAL STREAMS		NUMBER OF CASES IN ALL STREAMS	
	1895-1904	1921-30	1895-1904	1921-30
6 agricultural				
3 "inaccessible"†.....	1.7	1.6	9,677	8,625
3 "accessible"‡.....	1.7	1.7	7,905	6,666
4 rural industrial.....	3.3	4.2	22,730	18,449
1 town, Västerås.....	8.2	10.3	21,878	33,938

* The percentages in this table are taken from Table I in the article by Thomas, *op. cit.*, p. 152.

† Surrounded by agricultural communities.

‡ Surrounded by all types of community.

In Table 4 the proportion of all in-migrants plus all out-migrants from two types of community and one town, Västerås, migrating to Stockholm are given for each of two periods of migration. The proportions show that as the degree of industrial development of community of out-migration increases, so do the relative number of out-migrants to Stockholm. This holds good for each time period with very little difference in proportions. The classification of agricultural communities as accessible to all types of community or immediately inaccessible to other types of community than agricultural communities has little effect on the proportion to Stockholm of the total streams of migration.

The analysis of migration data for the town, Västerås, on the type of community of destination or origin of a single move reveals the great proportion of all in- or out-migration which is interchange in character and the relatively small part agricultural migrants play in migration to a town. The progressive nature of moves, in general, is also brought out by the greater proportion of all in-migrants to a town from agricultural communities compared to the proportion of all out-migrants from the town to agriculture. When the same destination of a single move, Stockholm, is analyzed with respect to the proportion of all out-migrants with this destination from each of three types of community, it is not the proportion of out-migrants from agriculture but the proportion of town out-migrants which is greatest; thus indicating again the possible progressive nature of moves from agriculture to a large metropolis as well as the interchange nature of all urban migration.

This type of analysis of migration where the origin and destination of a single move are both classified by an index of industrial development for all migrants into or out of selected communities supplements the static type of analysis by birthplace and place of residence at a given instant of time, for it brings into focus the heterogeneity of the streams of migration over a period of time as well as the necessity for a sociological significant point in this continuous migration process for the orientation of a migration study. As previously explained, the type of community of birth is considered such a point. The picture of population redistribution as given in Tables 1 and 2 by the use of birth place and the place of residence at a given time may be very misleading as to the process of migration, since there is such an enormous amount of intercommunity migration in all directions from all types of community. Therefore, three points in a migrational history, at least, seem necessary for a check on any predicted regularity in the process of migration. The Swedish material described in the preceding chapter and to be analyzed in this study gives three points in the migration history and will be used in an attempt to find a systematic relationship between type of community of birth and migration to a large city—Stockholm.

CHAPTER IV

DISCUSSION OF MATERIAL ON TYPES OF COMMUNITY OF IN-MIGRATION TO STOCKHOLM BY TYPES OF COMMUNITY OF BIRTH

ALL places of birth were classified by the Myrdal classification, the date of birth determining whether a community was to be classified as of the 1904, 1914, or 1924 classification. If the date of birth of a migrant was prior to 1895 when the first period (1895-1904) of classification of all Swedish communities was determined, the 1904 classification was used. In the case of agricultural communities no bias was introduced by this method, however, for industrial communities the classification as of 1904 might be subject to error. By referring to the special community monographs from which the objective criterion of classification was modified, it was found that about one-half of the industrial communities could legitimately be classed as industrial previous to 1895.¹ There were 3 cases out of the total 16,302 where the place of birth could not be found as a community.

In the classification of the last community of residence, the community was classified as of the date of in-migration to Stockholm. In only 6 per cent of the cases would this method have led to any error, as only this percentage of all migrants had a date of in-migration prior to 1895. However, there were additional difficulties owing to the various degrees of incompleteness of the data concerning last place of residence and date of in-migration. In 1,227 cases out of the total of 16,302 there was no information regarding either place of last residence or date of in-migration, except the fact that migration had taken place previous to 1920.² The proportions of these

¹ For these communities the monographs showed that the main industry had been established a good deal prior to 1895, sometimes as far back as 1849. For the other communities the monographs had no data on whether the industries had been established prior to 1895.

² See chap. ii, p. 19.

cases by type of community of birth were 37 per cent agricultural-born, 31 per cent industrial- and mixed-born, and 32 per cent town-born. Comparing these proportions with the proportions born in the three types of community for all migrants,³ it is evident that incomplete cases were distributed by community of birth practically identically with the complete, and that no bias was introduced by the omission of these cases. There were 82 cases, in addition, where date of in-migration was given but no place. In 9 cases the last place of residence was a community which changed classification in either 1914 or 1924; and, since no date of in-migration was given, no classification was possible. There were 13 additional cases where the last place of residence given could not be found as a community and had to be excluded. In 152 cases the last place of residence was in a foreign country. This makes a total of 1,486 cases excluded, leaving a total of 14,816 classified cases, out of the total number of cases—16,302. Of this total, 1,868 had as a last place of residence one of the communities considered by the census a suburb of Stockholm and treated as such in the census yearbooks for Stockholm from 1928 on. In order to eliminate as far as possible the inclusion of migrants who may have resided in Stockholm previous to date of in-migration as given in the 1930 census material, it was considered advisable not to classify the place of in-migration of these moves by the Myrdal classification but to tabulate them under the heading "Stockholm's Suburbs." These suburbs of Stockholm may not have been as integral a part of Stockholm city over all the years included in this study but, nevertheless, the very proximity of these suburbs to Stockholm makes migration from them a different phenomenon than migration from communities not dependent on Stockholm for occupations and general economic functioning.

The tables to be presented in this chapter have been focused at a solution of the problem of whether there is any predictable regularity in the process of migration to a large city when the community of origin of all migrations, that of birthplace, has been classified by an index of the degree of industrial development and a second point in the migration process can be identified and similarly classified. The prediction of regularity is based upon the hypothesis elaborated

³ See Table 5.

in the Introduction. The first prediction is that Stockholm drew in population born in the three types of community in proportion to the degree of similarity in industrial development between the type of community of birth and Stockholm.

It was shown in Table 2 that the chance of being born in a rural community and living in Sweden in 1930 for the Västmanland-born

TABLE 5

NUMBER OF MIGRANTS BY TYPE OF COMMUNITY OF BIRTH AND TYPE OF COMMUNITY OF IN-MIGRATION TO STOCKHOLM FOR 1930 STOCKHOLM POPULATION BORN IN VÄSTMANLAND COUNTY

(Expressed as Proportions of Total Number of Cases)

TYPE OF COMMUNITY OF BIRTH	TYPE OF COMMUNITY OF IN-MIGRATION TO STOCKHOLM					TOTAL	NUMBER
	Com- munity of Birth	Agricul- ture	Industry and Mixed	Stock- holm's Suburbs	Towns		
Agriculture.....	6.69	4.08	7.15	4.87	12.71	35.50	5,259
"Mixed".....	1.43	0.43	1.74	0.88	2.12	6.60	978
Industrial.....	9.94	1.37	4.90	3.20	7.42	26.83	3,975
Towns.....	15.88	1.35	3.68	3.65	6.51	31.07*	4,604
Total.....	34.94	7.23	17.47	12.60	28.76	100.00	14,816
Total four types of community.....		13.92	28.84	12.60	44.64	100.00	.....
Number of cases.	5,029	1,079	2,589	1,868	4,258	.....	14,816

* When the whole sample of 16,302 cases is classified into rural communities and towns, the proportion born in towns is 31.23 per cent, or 5,091 cases.

population was four times as great as the chance of being born in a town and living in Sweden in 1930. By classifying the Västmanland-born population of Stockholm in 1930 by type of community of birth, a partial verification of the first prediction can be obtained. Partial only because there are no data on the population born in agricultural, rural "mixed," and rural industrial communities and living in Sweden in 1930, since the Swedish census does not break down the population born in rural communities into this threefold classification.

Table 5 gives the proportion of migrants born in towns in

Västmanland County and living in Stockholm in 1930 as 31 per cent, in rural "mixed" and rural industrial communities as $33\frac{1}{2}$ per cent, and in agriculture as $35\frac{1}{2}$ per cent. In other words, 31 per cent were born in towns and living in Stockholm in 1930, 20 per cent were born in towns and living in Sweden in 1930; while 69 per cent were born in rural communities and living in Stockholm, against 80 per cent born in rural communities and living in Sweden. There is, as previously noted, a definite selection of the town-born to Stockholm when compared to the chance proportion, and conversely a less than expected proportion of the rural-born. But whether the agricultural-born are selected randomly or not is harder to answer for lack of a standard with which to compare them. An actual tabulation of all persons born in Västmanland County between the years 1860 and 1930 by type of community of birth gave the proportion of total births in Västmanland for agricultural communities as 42 per cent, in industrial and mixed communities as 41 per cent, and in towns as 17 per cent.⁴ It seems probable that the 80 per cent rural-born of the census was divided evenly between agricultural and industrial and mixed communities. It cannot be claimed, however, that the proportions of actual births in agricultural and industrial and mixed communities are necessarily exactly the same as the proportions of agricultural- and industrial and mixed-born living in Sweden in 1930. However, the former and latter proportions cannot differ by much in view of close similarity between the town-born proportion of 17 per cent for actual births and the 20 per cent born and living in Sweden in 1930. Therefore, instead of having twice as many agricultural- as town-born as would be expected by chance, about an equal proportion of agricultural- as town-born is actually living in Stockholm. Furthermore, the proportion of actual births in industrial communities was $29\frac{1}{2}$ per cent, and the proportion of industrial-born living in Stockholm 27 per cent. Therefore, Stockholm draws in industrial-born persons in about chance proportions. The rural-mixed-born proportion of actual births is 11 per cent compared to $6\frac{1}{2}$ per cent living in Stockholm. There is, then, a less than expected proportion of both rural-mixed-born and agricultural-born, an expected proportion of indus-

⁴ The total number of births from 1860 to 1930 was 250,651.

trial-born, and a more than expected proportion of town-born living in Stockholm in 1930 of the native Västmanland population. There is, then, no indication that there is a selection of the agricultural-born for residence in Stockholm or of the rural-mixed-born, but rather the town-born alone are selected for migration to Stockholm when compared to the expected proportions as above. This indicates that the degree of industrial development of community of birth of migrants is a selective factor in Swedish cityward migration.

Table 5 also gives the proportions of the total Västmanland population living in Stockholm in 1930 by type of community of last place of residence previous to residence in Stockholm. It was postulated that most migrants would move into Stockholm from other towns even when not born in a town, for cityward migration was assumed to proceed by progressive stages for the agricultural-born especially and the industrial-born as well. The last place of residence of 45 per cent of all Västmanland-born persons was a town, of 29 per cent an industrial or mixed community, and of 14 per cent an agricultural community. The remaining 12 per cent of all persons moved from the suburbs of Stockholm. The most frequent place of last residence is, therefore, as postulated, a town and least frequently an agricultural community (excluding from consideration the moves from suburbs).

It is possible, however, that the population of the different types of community as well as their distance from Stockholm may be important variables in the determination of the number of migrants coming from each type of community of in-migration to Stockholm. The solution to this problem will be taken up in chapter v.

The final prediction following from the hypothesis underlying this study of cityward migration concerns the proportion of moves of persons born in each type of community and living in Stockholm which would be directly to Stockholm from community of birth or indirectly to Stockholm from a community of other than that of birth. A move is defined as direct when the community of birth and community of in-migration to Stockholm are identical, and as indirect when community of birth and community of last residence previous to residence in Stockholm are not identical. For the present purpose direct moves are considered to correspond to first moves.

The predictions concerning the relationship of type of community of birth and direct moves to Stockholm are that the proportions of all agricultural-born persons moving directly to Stockholm will be less than the proportion of all industrial-born direct moves; this latter proportion in turn will be less than the proportion of all town-born direct moves.

The predictions concerning the relationship of indirect moves and type of community of birth are that the proportion of indirect moves increases from each type of community of birth as the degree of industrial development of community of birth becomes less similar to that of Stockholm. And, furthermore, that indirect moves to Stockholm will reveal the progressive nature of migration to a large city by showing that the proportion of all agricultural-born persons moving indirectly to Stockholm will be greatest from towns and least from other agricultural communities. This statement should also hold true for indirect moves to Stockholm of the industrial- and mixed-born. Finally, it would follow that the moves of the town-born to Stockholm should be almost entirely from town of birth or another town, the relationship between the direct and indirect moves to Stockholm depending somewhat on the distance of the towns in question from Stockholm.

However, to expect that these predictions will be entirely borne out by the data to be presented would be to overlook two points: (1) that direct moves from community of birth are not necessarily first moves and (2) that Stockholm is very near Västmanland County and accordingly must exert a very great pull on the population of this practically adjacent county. With regard to the first point, there is no way of knowing how many moves where place of birth and last place of residence are recorded as the same really means a first move to Stockholm or represents just a very small section of an extensive migrational history directed from place of birth. Therefore, in the term "direct move to Stockholm" two types of moves are really included: the first moves of persons born in each of the community types and the nonfirst moves of persons who have returned to birthplace and subsequently moved to Stockholm. It is assumed in the following discussion that for both types of direct moves the type of place of birth is an important factor in pre-

dicting the proportion of such moves to a city. For in any case those migrants moving away from community of birth to return later and subsequently move to Stockholm would be less likely to make such a subsequent move from an agricultural community than from a town or industrial community under the hypothesis of this study. So that direct moves to Stockholm, though not including a single type of move, contain two types of migrants behaving in the same way in relation to type of community of birth and its effect on the process of migration to Stockholm. The fact that 35 per cent of all moves to Stockholm of these Stockholm residents were direct moves probably ties up also with the second factor, that of the small distance (40-90 miles) of Västmanland County communities from Stockholm. Since for the most part migration proceeds by short moves, when the migrants originate from a section so close to the largest industrial center in Sweden, there is undoubtedly a greater pull over all types of migrants and, therefore, a greater chance that the first move will bring a migrant right from place of birth to Stockholm. So that, if the number of direct moves is inflated for all types of migrants, the inflation would be less proportionately for the agricultural-born than the town-born, providing the type of community of birth has any relevance in determining the destination of a move.

Table 6 gives the proportion of migrants born in each type of community moving directly from community of birth to Stockholm and indirectly by type of community of last residence previous to residence in Stockholm for the entire sample of Västmanland-born population except for exclusions previously discussed.

The proportion of native Västmanland County agricultural-born persons living in Stockholm in 1930 who moved to Stockholm directly from community of birth was 22 per cent, of all industrial and mixed-born 39 per cent, and of all town-born 58 per cent. So that, as the type of community of birth resembles Stockholm in degree of industrial development, direct moves to Stockholm increase. That is, the town-born proportion of direct moves to Stockholm is more than twice as great as the agricultural-born proportion. The industrial- and mixed-born proportion is midway between the agricultural- and town-born proportions, as would be expected by its intermediate type of industrial development.

The proportions of indirect moves to Stockholm from another community but of the same type as community of birth were: 13 per cent for the agricultural-born, $22\frac{1}{2}$ per cent for the industrial- and mixed-born, and 24 per cent for the town-born. This means that 35 per cent of the agricultural-born moved from agricultural communities to Stockholm (i.e., indirect moves from other agricultural communities plus direct moves from community of birth), 61 per cent of the industrial and mixed-born from industrial and

TABLE 6

PERCENTAGE DISTRIBUTIONS BY TYPE OF COMMUNITY OF BIRTH OF TYPE OF COMMUNITY OF IN-MIGRATION TO STOCKHOLM FOR VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION

MOVED TO STOCKHOLM FROM	TYPE OF COMMUNITY OF BIRTH			TOTAL
	Agriculture	Industry and Mixed	Towns	
Community of birth.....	21.84	38.75	57.91	38.84
Agriculture.....	13.33	6.14	4.92	8.28
Industry and mixed.....	23.36	22.61	13.44	19.99
Towns.....	41.46	32.50	23.73	32.89
Total.....	100.00	100.00	100.00	100.00
Number of cases.....	4,537	4,348	4,063	12,948
Number moved from suburbs	722	605	541	1,868
Grand total	5,259	4,953	4,604	14,816

mixed communities, and $81\frac{1}{2}$ per cent of the town-born from town of birth or other towns. These proportions show conversely that moves from a community of another type than that of birth predominate among the agricultural-born and are at a minimum among the town-born. In the case of the agricultural-born such moves are necessarily from industrial and mixed communities or towns. In fact, the number of town moves, $41\frac{1}{2}$ per cent, is greater than the number of moves from industrial and mixed communities, 23 per cent, as was to be expected if agricultural-born persons move progressively to a city.

However, it was not to be expected that the direct moves of the agricultural-born would be nearly equal in number to the indirect

moves from industrial and mixed communities. Nor was it to be expected that the direct moves of the industrial-born would be greater than the indirect moves from towns. The short distance of Stockholm from Västmanland communities, in general, may account for the failure to verify these two specific predictions. The pull of a large city may, in other words, in a certain number of cases counteract the effect of the differential in material environment between agricultural communities and a large city, although, as previously pointed out, this does not seem to be the case in general. Likewise, the large proportion of the industrial- and mixed-born moving directly or indirectly to Stockholm from industrial and mixed communities may be again due to the distance factor counteracting the differential in material environment; but, as the differential is less in this case, the effect of distance has been greater. So that at certain distances from a large city, the theory of the progressive nature of migration from rural areas to a large city may break down to a degree that is directly related to the type of community from which migration takes place.

Again, in view of the small distance between Stockholm and the towns in Västmanland County, the proportion of the town-born Stockholm residents moving directly to Stockholm might be expected to be greater than indirect moves from other towns. In fact, the direct moves of the town-born are two and one-half times as frequent as the indirect moves from other towns. However, not only may the effect of distance enter in here but also the fact that some of these direct moves were undoubtedly caused by the children of family migrants to Stockholm whose parents resided in a town in the process of moving to Stockholm. For it seems fair to assume that persons resident in Stockholm in 1930 who were less than fifteen years of age at the time of the 1930 census did not for the most part migrate to Stockholm alone but as a member of a family. Now the proportion of all the town-born residents less than fifteen years of age in 1930 was about 8 per cent, of all industrial- and mixed-born 5 per cent, and of the agricultural-born $1\frac{1}{2}$ per cent. It seems very unlikely that all the parents of these children were born in the same or same type of community as their children or, necessarily, even born in the county of Västmanland at all. Therefore,

the higher proportion of the town-born under fifteen years of age than of the agricultural-born may be interpreted as additional evidence of the progressive nature of migration to Stockholm of families, in the sense of moves of short distances as well as from towns rather than from rural communities.

The rest of this chapter is devoted to a breakdown of the Västmanland-born Stockholm residents by years of in-migration. Three periods of in-migration are used—1930-28, 1927-21, and 1920-1860. One reason for this breakdown was to make sure that the relationships between type of community of birth and type of community from which migration to Stockholm took place found for the whole sample were not the result of averaging together great variations in these proportions to give the predicted relationships. Another reason was to see whether there were any trends in the proportions indicative of the possible changes in the process of migration during this long period of time. For instance, would the greater transportation facilities in recent years increase the proportions of direct moves to Stockholm for persons born in all types of communities? In short, therefore, does the process of migration go on pretty much the same year after year in spite of probable economic and industrial changes in a country, or will these changes be reflected in the following analysis of migration by years of in-migration?

Table 7 gives the proportions comparable to those in Table 6 for migrants to Stockholm during the years 1928 through 1930. Twenty-three per cent of all the Västmanland-born 1930 Stockholm population moved into Stockholm during this three-year period. The town-born proportions by type of community of in-migration show surprisingly few differences as compared to the proportions for the whole sample population in Table 6. The industrial- and mixed-born proportions show a slightly greater proportion moving directly to Stockholm than was found for the sample as a whole (43 per cent as compared to the 39 per cent) with a corresponding decrease in the proportion moving indirectly from towns. It is in the agricultural-born proportions, however, that the greatest differences occur. The proportion moving from towns is 36 per cent as compared to the 41½ per cent in Table 6, and the moves from industrial and mixed communities are 33 per cent as compared to 23 per cent. The prin-

cial change in distribution of proportions in this three-year period is a general increase for each type of community of birth in the proportion of indirect moves from industrial communities as well as in the proportion of direct moves of the industrial- and mixed-born from community of birth.

Table 8 gives the same tabulation of proportions for the migrants to Stockholm during the seven-year period 1927-21, when 30 per

TABLE 7

PERCENTAGE DISTRIBUTIONS FOR MIGRANTS TO STOCKHOLM DURING PERIOD 1928-30 BY TYPE OF COMMUNITY OF BIRTH OF TYPE OF COMMUNITY OF IN-MIGRATION FOR VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION

MOVED TO STOCKHOLM FROM	TYPE OF COMMUNITY OF BIRTH			TOTAL
	Agriculture	Industry and Mixed	Towns	
Community of birth.....	17.31	42.77	55.16	38.74
Agriculture.....	13.80	5.14	4.87	7.75
Industry and mixed.....	32.98	24.05	16.45	24.44
Towns.....	35.91	28.03	23.52	29.07
Total.....	100.00	100.00	100.00	100.00
Number of cases.....	855	1,031	863	2,749
Number moved from suburbs	201	230	182	613
Grand total.....	1,056	1,261	1,045	3,362

cent of all 1930 Västmanland-born residents in-migrated to Stockholm. The table certainly shows no major shifts in the relationships of the proportions for any type of community of birth. The proportion of direct moves of the agricultural-born has decreased over the previous three-year period as well as for all years of in-migration combined. The proportion of the agricultural-born moving from towns—42 per cent—is greater than the same proportion for the years 1928-30—36 per cent—and the same as for the whole sample. The relative increase in moves from industrial and mixed communities for all types of community of birth is found in this period also as compared to the whole migration period.

Table 9 gives the Västmanland-born in-migrants to Stockholm during the years 1860-1920. In this subperiod the proportion of the

agricultural-born moving from industrial and mixed communities has fallen to 16 per cent from 33 per cent in the two previous periods.

TABLE 8

PERCENTAGE DISTRIBUTIONS FOR MIGRANTS TO STOCKHOLM DURING PERIOD 1921-27 BY TYPE OF COMMUNITY OF BIRTH OF TYPE OF COMMUNITY OF IN-MIGRATION FOR VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION

MOVED TO STOCKHOLM FROM	TYPE OF COMMUNITY OF BIRTH			TOTAL
	Agriculture	Industry and Mixed	Towns	
Community of birth.....	14.55	40.11	54.06	37.02
Agriculture.....	11.80	5.16	5.19	7.16
Industry and mixed.....	31.68	21.99	16.88	23.22
Towns.....	41.97	32.74	23.86	32.60
Total.....	100.00	100.00	100.00	100.00
Number of cases.....	1,127	1,396	1,232	3,755
Number moved from suburbs	302	245	255	802
Grand total.....	1,429	1,641	1,487	4,577

TABLE 9

PERCENTAGE DISTRIBUTIONS FOR MIGRANTS TO STOCKHOLM DURING PERIOD 1860-1920 BY TYPE OF COMMUNITY OF BIRTH OF TYPE OF COMMUNITY OF IN-MIGRATION FOR VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION*

MOVED TO STOCKHOLM FROM	TYPE OF COMMUNITY OF BIRTH			TOTAL
	Agriculture	Industry and Mixed	Towns	
Community of birth.....	26.57	35.61	61.53	39.94
Agriculture.....	13.86	7.39	4.78	9.16
Industry and mixed.....	16.48	22.28	9.96	16.21
Towns.....	43.09	34.72	23.73	34.68
Total.....	100.00	100.00	100.00	100.00
Number of cases.....	2,555	1,921	1,968	6,444
Number moved from suburbs	219	130	104	453
Grand total.....	2,774	2,051	2,072	6,897

* There were actually 4 migrants previous to 1860.

Likewise, the proportions of the town-born moving into Stockholm, from industrial and mixed communities has decreased from the two previous subperiods and the period as a whole. There has been a corresponding increase in the direct moves to Stockholm of the agricultural- and town-born in this last subperiod.

Therefore, this breakdown of the sample by years of in-migration has revealed a trend toward a greater proportion of moves from industrial and mixed communities among these in-migrants to Stockholm in the ten-year period 1920-30. But, instead of finding more direct moves from community of birth in recent years as might have been expected as a result of increased transportation facilities overcoming the effect of the differential in the degree of industrial development between agricultural communities and Stockholm, the reverse tendency has actually been found. This may indicate, perhaps, that the economic push and pull before 1920 was more effective in determining the process of migration than in recent years when, possibly, more experience in industrial work was a prerequisite to finding employment in a large city.

This increase in the proportion of direct moves from community of birth among the agricultural-born residents in Stockholm in this last subperiod is interesting for another reason as well; for the prediction was made at the beginning of the chapter that the proportion of the agricultural-born moving from agricultural communities should by hypothesis be smaller than the proportion moving to Stockholm from industrial and mixed communities. This was not found to be the case for the sample as a whole. But by this breakdown of the sample into years of in-migration, it is seen that this prediction does hold for the in-migrants after 1920 but not for those before. This is, however, the one relationship between proportions that was not found by a study of the sample as a whole.

There is one other fact which this breakdown of the sample of the Västmanland-born Stockholm residents has revealed. This is the tremendous increase in the proportion of moves from the suburbs of Stockholm for residents born in all types of community of birth. From 1860-1920, 6.6 per cent of all moves to Stockholm of the Västmanland-born were from the suburbs; from 1921 to 1927, 17.6 per cent; and from 1928 to 1930, 18.2 per cent. This means that in

recent years there are relatively fewer cases where the place of last residence previous to residence in Stockholm is known to be substantially distinct from residence in Stockholm, and this fact may in turn affect the proportions of direct and indirect moves by type of community of birth.

SUMMARY

This chapter has been devoted to an attempt to show the significance of the type of industrial development of community of birth of migrants upon the chances and the process of migration to a city. The hypothesis is that it is less probable that a person born in an agricultural community will move to a city than a person born in a community with some degree of industrial development. In fact, it was postulated that the higher the degree of industrial development of a community, the easier the movement of its native population to a large industrial city such as Stockholm. So that to speak solely of the economic push and pull in the problem of rural-urban migration is to neglect this factor of material environment and its influence on the process of migration.

The expected ratios of town-, industrial-, mixed-, and agricultural-born were compared with the actual ratios as found in the Stockholm population of 1930. This comparison showed that the town-born of the native Västmanland population alone were found more frequently in the Stockholm population in 1930 than was to be expected on the basis of the ratio of the town-born to the non-town-born in the native population of Västmanland County living in Sweden in 1930. This division of the Västmanland-born 1930 Stockholm residents by type of community of birth does, therefore, seem to bear out the hypothesis that the degree of industrial development of the birthplace of such residents is a relevant factor in determining the chances of migration to Stockholm.

But the fact remains that there were agricultural-born residents in this Stockholm population. It was postulated that if the agricultural-born did migrate to Stockholm it was not directly from community of birth but from a community with a higher degree of industrial development. The analysis did show that the agricultural-born did not move as frequently from community of birth

or another agricultural community to Stockholm as the town-born from community of birth or another town. In other words, the agricultural-born resided most frequently in a town previous to residence in Stockholm. Therefore, the type of community of birth for this sample of Stockholm residents seemed to determine the process of migration to Stockholm as well as the chances of residence in Stockholm in 1930.

A breakdown of the whole sample population of Stockholm residents by years of in-migration did not reveal that the time of in-migration was a variable likely to counteract the relationships found above between the process of migration and the type of community of birth. On the contrary, in one instance an expected relationship not found in the proportions for the whole period was found to hold good in two of the subperiods of in-migration analyzed. In these two subperiods the proportion of the agricultural-born moving from industrial and mixed communities was found to be greater than the proportion of direct and indirect moves to Stockholm from agricultural communities. It was expected that this relationship would be found in the proportions for the whole sample. That it was not found was due to the fact that the earlier in-migrants to Stockholm moved more frequently from community of birth than the migrants after 1920.

Table 5 at the beginning of the chapter showed that the type of community of last residence of this Stockholm population was in 45 per cent of all cases a town and in only 13 per cent of all cases an agricultural community. Is this actually sufficient proof of the proposition that migration to a large city is from other urban centers or is it the result of distance factors which bias unfavorably the agricultural moves to Stockholm? The next chapter will be devoted to the effect of distance upon the rate of migrants per 10,000 population of the Västmanland-born population resident in Stockholm.

CHAPTER V

RATE OF MIGRANTS PER TEN THOUSAND POPULATION BY DISTANCE OF COMMUNITIES FROM STOCKHOLM

VÄSTMANLAND COUNTY lies not adjacent to Stockholm County, at whose most eastern edge the city of Stockholm itself is situated, but to the west of Stockholm County and next to two rather narrow counties bordering Stockholm County along the west. As a result of the geographical position of Västmanland County with respect to the city of Stockholm, the distance between some of the communities in Västmanland and Stockholm is as little as forty-five miles. Since migration proceeds by short-distance moves for the most part, a great many moves of the native Västmanland population should be from county of birth and the counties even nearer Stockholm. It is not surprising, therefore, that Table 10 shows that 56 per cent of all moves to Stockholm of the Västmanland-born were from county of birth and 20 per cent from Stockholm County (including moves from suburbs). The towns in Västmanland and Stockholm counties contributed 30 per cent of all migrants residing in Stockholm in 1930 and born in Västmanland County. In order, therefore, to show at all conclusively that migration to Stockholm is primarily from towns, regardless of the type of community of birth, because of the similarity between the material environment of towns and Stockholm, it is necessary to hold constant population and distance as related to the amount of migration from the three community types. That is, can it be shown that agricultural communities at the same distance from Stockholm as towns contribute fewer of these residents of Stockholm than towns when the number of such residents is related to the number of persons living in these two types of community at a given time?

To hold constant distance as well as compute rates of migrants per 10,000 population is not an easy task in view of the size of the sample, the possible changes in population growth over a long

period of time, and the fact that the migrants in this study are survivors of death and remigration from Stockholm for varying length of time periods. Ideally it would be best to take a town, an industrial, a mixed, and an agricultural community at the same distance from Stockholm and compute the rate of migrants per 10,000 population and then to repeat this process for a similar group of communities at increasing distances from Stockholm. Then, if type of community were the important variable and not its distance from

TABLE 10

NUMBER OF MIGRANTS BY TYPE OF COMMUNITY OF BIRTH AND COUNTY OF IN-MIGRATION TO STOCKHOLM FOR VÄSTMANLAND-BORN
1930 STOCKHOLM RESIDENTS
(Expressed as Proportions of Total Number of Cases)

COUNTY OF IN-MIGRATION	TYPE OF COMMUNITY OF IN-MIGRATION				TOTAL	NUMBER
	Agriculture	Rural	Towns	Suburbs		
Västmanland.....	10.49	17.88	27.81	.....	56.18	8,324
Stockholm.....	0.65	4.85	1.82	12.61	19.93	2,952
"Other" counties.....	2.78	6.12	14.98	.....	23.89	3,540
Total.....	13.92	28.85	44.62	12.61	100.00	14,816
Number of cases.....	2,063	4,274	6,611	1,868	.....	.....

Stockholm, the rate of migrants per 10,000 population as computed should be greatest for the town community chosen, becoming progressively smaller for the industrial, mixed, and agricultural communities. By repeating the process at progressively greater distances from Stockholm, it would be possible to discover whether an increase in distance had the same effect upon the rate of migrants for each community type, or whether there was a difference in effect according to type of community.

Such a detailed analysis was not feasible, owing to the small number of migrants from any one town or rural community over a period of years where the factors of population growth and remigration from Stockholm could be assumed negligible. Instead the persons born in Västmanland and taking up residence in Stockholm

during the years 1930 through 1921 were analyzed. This meant a total number of 6,504 cases for analysis when the moves from Stockholm's suburbs (1,415), the moves from outside Sweden (85), and 10 cases whose last place of residence was unclassified had been excluded. Furthermore, with the knowledge that more than half of these migrants moved from the county of Västmanland; that probably a good proportion of the remaining migrants moved into Stockholm from communities in Stockholm, Upsala, and Södermanland counties (these counties are nearer Stockholm than Västmanland County); and that only 13 per cent of all moves were from agricultural communities meant that the distance categories chosen would have to be fairly small and yet cut through Västmanland County so as to insure enough cases for computing the rates for each type of community. Two distance categories were chosen: within a 100 km. radius of Stockholm and outside of this 100 km. radius. These two distance categories gave about an equal number of migrants in both distance categories and also a sufficient number of cases for each subsample for the computation of rates.

The less than 100 km. migrants could come from all communities in Stockholm County except 4, from all communities in Upsala County except 8, all communities in Södermanland County except 13, and the largest town (Västerås), 9 industrial and mixed communities, and 21 agricultural communities in Västmanland County itself. This left in the more than 100 km. category all migrants from 3 towns, 18 agricultural communities, and 19 industrial communities in Västmanland County; and from 25 communities in Upsala, Södermanland, or Stockholm counties; plus migrants from the communities in all the remaining counties in Sweden.

Using such broad distance categories may obscure any minor differences in rate of migrants, especially from the communities close to Stockholm. For it is possible that the rate of migrants from agricultural communities within a less than 10 km. radius of Stockholm may be greater than the town rate, but that the agricultural rate decreases rapidly with distance while the town rate decreases slowly in comparison. Therefore, the rates to be presented in Tables 12 and 13 do not preclude the possibility that there is some such point in the distance from Stockholm where the agri-

cultural rate exceeds the town rate; they only indicate that the sum total rate for the less than 100 km. migrant to Stockholm from agriculture is or is not greater than the town rate.

Rates of migrants have been computed separately for moves directly to Stockholm from community of birth (Table 11) and for moves indirectly to Stockholm from a community other than that of birth (Table 12). The population base for the former rates included only those communities in Västmanland County, while the population base for the latter rates included all communities in Sweden falling in the less than or more than the 100 km. distance category. The population bases in Table 12 compared to Table 11 are much less specific¹ and, therefore, no comparison of the size of rates between the two tables has any meaning. Furthermore, the rates of migrants from "other" communities than that of birth for less than 100 km. moves are computed on a population base which undoubtedly includes more persons born in Västmanland than the population base for the more than 100 km. communities. For, although it may be assumed that to some extent the number of persons born in Västmanland and resident in a community increases with the size of the population of the community, however, in view of the great pull of Stockholm over all types of communities and the short distance of most migration, the ratio of size of population to the number of Västmanland-born in the population may not be as great in the more than 100 km. communities from Stockholm. Consequently, when the population of all communities more than 100 km. from Stockholm are added together to give the population base of the more than 100 km. moves (the population of all these communities is about $5\frac{1}{2}$ million), the possible number of migrants is not necessarily increased in the same ratio as the population and may actually include no more possible migrants than the population base for the less than 100 km. communities—about 450,000 persons. Therefore, although it is assumed that the possible number of migrants increases with the size of the population of a community, it does not seem safe to assume that this ratio is the

¹ This population base includes communities from which no migration ever took place or could take place (i.e., no persons living in community who were born in Västmanland).

same no matter what the distance of a community from Stockholm. And, therefore, all comparisons of rates of migrants from communities other than that of birth should be made within a given distance category and not between the two distance categories.

Table 11, which gives the rate of migrants per 10,000 population for moves directly to Stockholm from community of birth, should show, if the difference in degree of industrial development between

TABLE 11

RATE OF MIGRANTS PER 10,000 POPULATION* DIRECTLY FROM COMMUNITY OF BIRTH TO STOCKHOLM DURING PERIOD 1921-30 BY DISTANCE FOR THE 1930 POPULATION OF STOCKHOLM-BORN IN VÄSTMANLAND COUNTY

TYPE OF COMMUNITY OF BIRTH	DISTANCE OF COMMUNITY OF BIRTH FROM STOCKHOLM		POPULATION BASE	
	Less than 100 Km.	More than 100 Km.	Less than 100 Km.	More than 100 Km.
Agriculture.....	63.00	71.71	21,110	24,960
Rural.....	95.52	155.13	15,180	55,080
Towns.....	193.59	297.10	29,340	19,320
Changed A to R†.....	90.61‡	86.67§	3,090||	6,770||

* Rates were computed by relating the total number of migrants for the ten-year period to the average mean yearly population for that period. The population of a Swedish community or town is the population as of the last day of the year. Therefore, it was necessary to obtain the mean population per year (i.e., the mean of the population of the last day of the preceding year plus the population of the given year) for each of the ten years under consideration, sum, and divide by ten to get the population base.

† Communities which changed classification in 1924 from agriculture to "mixed" or industrial.

‡ This rate is for 2 communities only and based on 26 migrants.

§ This rate is for 3 communities only and based on 58 migrants.

|| This is a six-year average mean yearly population, that is, from 1924 to 1930.

community of birth and Stockholm is a relevant factor in the migration process, that the rate for agricultural communities is less than the rate for either industrial and mixed communities (rural communities as given in Table 11) or towns.

Considering the less than 100 km. rates in Table 11 as the degree of industrial development increases (i.e., the rates are compared in the order agriculture, rural, and towns), the rates increase from 63 to 95½ to 193½ migrants per 10,000 population. The communities which changed classification from agricultural to rural in 1924 have an intermediate rate between agricultural and rural rates—91 per 10,000 population. The more than 100 km. rates in the same

order are 72, 155, and 297 migrants per 10,000 population, and for the changing communities 87 per 10,000 population. Distance in the case of moves from community of birth does not decrease the rates but (except for the changing communities) increases them and more proportionately for the town- and rural-born than for the agricultural-born. The reason that the rate of migrants does not decrease with increased distance is probably due to the small distance differential between the more and less than 100 km. communities in Västmanland County. The less than 100 km. communities are actually between 70 and 100 km. from Stockholm, the more than 100 km. communities between 100 and 145 km. from Stockholm. The large town in Västmanland, Västerås, with a population of 30,000 in 1930, is about 80 km. from Stockholm. There are seventeen communities in Västmanland from 80 to 70 km. from Stockholm and nine that are 80 to 100 km. from Stockholm. The three remaining towns in Västmanland are more than 100 km. from Stockholm; they are about 105, 120, and 125 km. from Stockholm. Therefore, the rate of migrants born in the three small towns in Västmanland is greater than the rate of migrants born in the large town of Västerås. This indicates, perhaps, that the economic pull of Stockholm for the small towns is greater than for a large town when differences in distance are so small.

Table 12 gives the rate of migrants by distance from three types of community of last residence previous to residence in Stockholm when place of last residence was not community of birth or a suburb. Again the same relationship of rates as in Table 11 is obtained for either the less than or the more than 100 km. rates. That is, the rate of migrants per 10,000 population from agricultural communities is 21, from rural communities 34, and towns 82 when less than 100 km. moves are considered. The rates of migrants decrease considerably when the greater than 100 km. moves are compared to the less than 100 km. moves. This decrease is as much due to the enormous population base for the latter distance category, if not more, than to the fact of increased distance. The rate of migrants from agricultural communities more than 100 km. from Stockholm is 1, from rural communities 6, and from towns 8 per 10,000 population.

Tables 11 and 12 show that, for each distance category and for both direct moves to Stockholm from community of birth or indirect moves to Stockholm from another community than that of birth, the rate of migrants per 10,000 population was always greater for the towns than for rural communities, which rate, in turn, was always greater than the rate of migrants from agricultural communities. Therefore, even when population and distance

TABLE 12

RATE OF MIGRANTS PER 10,000 POPULATION* DIRECTLY TO STOCKHOLM FROM COMMUNITIES OTHER THAN COMMUNITY OF BIRTH BY DISTANCE AND TYPE OF COMMUNITY OF BIRTH DURING PERIOD 1921-30 FOR VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION

TYPE OF COMMUNITY OF BIRTH	TYPE OF COMMUNITY OF IN-MIGRATION TO STOCKHOLM					
	Agriculture		Rural		Towns	
	100 Km.	100 Km.	100 Km.	100 Km.	100 Km.	100 Km.
Agriculture.....	11.18	0.61	14.36	2.01	37.08	2.67
Rural.....	5.41	0.32	10.90	2.58	30.98	3.02
Towns.....	4.27	0.30	8.32	1.39	14.36	2.67
Total.....	20.86	1.23	33.58	5.98	82.42	8.36
Population base....	140,380	1,530,720	205,420	1,285,040	124,610	1,193,100

* Rates were computed by relating the total number of migrants for the ten-year period to the average mean yearly population for that period.

are held constant, the predicted relationship between type of place of last residence before residence in Stockholm and the number of migrants holds good. Thus the towns and not the agricultural communities are the feeders of population into Stockholm of the Västmanland-born population of Stockholm in 1930.

SUMMARY

In Table 5 it was found that the number of moves to Stockholm of the Västmanland County-born residents of Stockholm in 1930 from the same agricultural community as that of birth was about one-half as great as the number of moves from the same town as that of birth. Similarly, the number of moves of these residents

from the same industrial community as that of birth was two-thirds as great as the number of moves from towns of birth. This seemed to verify the prediction that, as the degree of industrial development of community of birth became more similar to that of Stockholm, the number of direct moves to Stockholm from community of birth would increase. It might be, however, that it was not this concept alone which was related to the foregoing results but the fact that the agricultural communities in Västmanland contain fewer possible migrants than the towns in Västmanland as measured by the population of these two types of communities during a given period of years. Furthermore, not only the population but the distance of this population from Stockholm might have been a factor influencing the foregoing results. By computing the rate of migrants per 10,000 population from community of birth during the ten-year period 1921-30 for each type of Västmanland County community for two distances categories, less than and more than 100 km. from Stockholm, both the factor of population or number of possible migrants and the distance of these possible migrants from Stockholm were held constant for each type of community of immigration to Stockholm. The rates which resulted from this computation as given in Table 11 showed that holding constant these two factors did not affect the relationship previously found. On the contrary, for the less than 100 km. moves the rate from towns was still twice as great as the rate from agricultural communities, while the more than 100 km. rates showed that the rate from towns was now four times as great as the rate from agricultural communities. Therefore, it is still the case that the residents in Stockholm in 1930 born in the county of Västmanland were drawn directly into Stockholm from towns of birth more frequently than from agricultural communities of birth whether the community of birth was 70-100 km. or 100-145 km. from Stockholm.

Table 5 also showed that the number of moves from towns for these Stockholm residents who moved to Stockholm from another community than that of birth was four times as great as the number of moves from agricultural communities and twice as great as the number of moves from industrial and mixed communities. This fact again seemed to confirm the hypothesis that Stockholm drew

in population from communities similar to it in degree of industrial development in greater proportions than from communities less similar in material environment. Here again the problem was whether these results were not due to the greater number of possible migrants residing in towns close to Stockholm than in agricultural communities or industrial communities. The rates of migrants per 10,000 population from communities other than that of birth showed that for communities less than 100 km. from Stockholm the rate from towns was four times as great as the rate from agricultural communities. The rates for more than 100 km. moves showed that the rate from towns was eight times as great as from agricultural communities. Consequently, the factors of population and distance of the different types of community when held constant did not alter the relationships postulated between residence in Stockholm and type of community of last residence previous to residence in Stockholm.

Therefore, no matter in what type of community in Västmanland a resident of Stockholm in 1930 was born, if he did not move directly from his community of birth, he last resided in a town more frequently than in any other type of community and in an agricultural community least frequently. Similarly the pull of Stockholm over the agricultural-born residing in community of birth was less than for the town-born.

CHAPTER VI

SUMMARY

THIS chapter will give a résumé of the background of the study, will restate the hypothesis to be tested, and will summarize as concisely as possible the statistical results so far obtained by this analysis of the process of migration to a city.

STATISTICAL MATERIAL

The Swedish decennial census for 1930 gave three points in the migrational process, place of birth, place of residence in 1930, and last place of residence previous to the 1930 residence. These data were abstracted from the census sheets for the population of Stockholm in 1930 born in the county of Västmanland, Sweden.

CLASSIFICATION OF COMMUNITIES

Sweden is divided into rural communities and towns for the purpose of population registration. The rural communities have been subclassified by Professor Myrdal into three types according to the relative taxation value of agricultural and "other" property. The three types of communities distinguished were agricultural, rural "mixed," and rural industrial. These three types of community differ from towns in the degree of their industrial development in the order mentioned.

THE HYPOTHESIS

The adaptation of migrants to the type of community into which they were born and where on the average they presumably resided during the formative years of life is considered in this study to be a factor in the migration process. The differences in adaptation are assumed to be roughly measured by the type of community of birth. The more two types of community resemble each other in degree of industrial development, the easier, it is assumed, is the flow of population between them. Therefore, when there is migration between agricultural communities and a city, the most difficult

type of migration is taking place from the standpoint of the differences in material environment. When the push and pull of economic and other factors do result in the migration of the agricultural-born to a large city such as Stockholm, it is further postulated that the process of migration will still reflect the effect of the material environment of the community of birth. This effect should be seen in the type of community of last residence of the agricultural-born residents. Thus the agricultural-born person should have migrated first to an industrial community or town and then to a city to reduce by gradual steps this difference in material environment.

Therefore, looking back on the process of cityward migration from the data on birthplace and last place of residence of this sample of the non-Stockholm-born population of Stockholm, a first step toward the verification of the relationship of the type of community of birth to the amount and stages in migration to a city could be made.

RELATIONSHIP BETWEEN TYPE OF COMMUNITY OF
BIRTH AND PROBABILITY OF RESIDENCE IN
STOCKHOLM IN 1930

If type of community of birth is a relevant factor in the movement of population to a city, it should be found that the native Västmanland agricultural-born persons were not to be found in relation to their frequency in the whole population of Sweden in 1930 as frequently in the Stockholm 1930 population as the town- or industrial-born. It was found that one-fifth of the native Västmanland County population living in Sweden in 1930 was born in towns; that, of the remaining four-fifths, one-half was probably born in agricultural communities and one-half in industrial and mixed communities. When the population of Stockholm in 1930 born in Västmanland County was classified by type of community of birth, about one-third of these Stockholm residents were born in each of the three types of community. Therefore, Stockholm did not draw in Västmanland County-born population in the expected ratio of four times as many rural-born (i.e., not town-born) as town-born. The ratio was actually two rural-born to one town-born. The agricultural- and mixed-born were found in less than expected proportions, the industrial-born in the expected proportion, and

the town-born in greater than the expected proportion. In relation, then, to the chances of birth in the towns and rural communities of Västmanland and residence in Sweden in 1930, it seems that the chances of residence in Stockholm are increased as the type of industrial development of community of birth most resembles that of Stockholm.

TYPE OF COMMUNITY OF IN-MIGRATION TO STOCKHOLM

According to the hypothesis, if the native Västmanland population of Stockholm in 1930 is classified by type of community of last residence previous to residence in Stockholm, most of these residents should have last resided in a town. For, it is postulated that the process of migration to a city of persons born in agricultural communities is a gradual process through types of communities more and more similar to Stockholm in type of industrial development. Therefore, the town-born would move from towns of birth and other towns to Stockholm and the agricultural-born also from towns to Stockholm.

The last place of residence in $12\frac{1}{2}$ per cent of the cases was a suburb of Stockholm. Since these suburbs were so near Stockholm as to be properly considered a part of the metropolitan area, no data were available for these cases as to place of in-migration to Stockholm. However, of the remaining $87\frac{1}{2}$ per cent of all cases, $44\frac{1}{2}$ per cent moved to Stockholm from towns, 29 per cent from industrial and mixed communities, and 14 per cent from agricultural communities. Therefore, as type of community of in-migration to Stockholm differs in degree of industrial development from Stockholm, the proportion of all moves from these communities decreases as was predicted.

TYPE OF COMMUNITY OF BIRTH AS RELATED TO THE PROPORTION OF DIRECT AND INDIRECT MOVES TO STOCKHOLM

The type of community of last residence for this sample of Stockholm residents was compared for persons born in each type of community. A person could move directly to Stockholm from community of birth, or indirectly to Stockholm from another community than that of birth. In other words, did the agricultural-

born residents as well as the town- and industrial-born residents move most frequently from a town to Stockholm? And, if persons moved directly to Stockholm from community of birth, was the proportion of such direct moves smaller relatively for the agricultural-born than for the town- and industrial-born?

Such a comparison was made for all the native Västmanland County residents in 1930 and for three subsamples by years of immigration—1860-1921, 1921-1927, and 1928-30. The results of this analysis showed that moves from community of birth to Stockholm of the town-born comprised from 54 to $61\frac{1}{2}$ per cent of all town-born moves. The proportions of moves direct to Stockholm for the industrial- and mixed-born varies from $35\frac{1}{2}$ to 43 per cent. The moves from community of birth of the agricultural-born comprised from $14\frac{1}{2}$ to $26\frac{1}{2}$ per cent of all agricultural-born moves. So that direct moves to Stockholm from community of birth were at least twice as frequent proportionately for the town-born as for the agricultural-born. Of all indirect moves of persons born in each type of community a town was most frequently the last place of residence previous to residence in Stockholm. The proportion of the agricultural-born moving to Stockholm from an agricultural community other than that of birth was in every subperiod about 11 per cent, that is, a greater proportion than for the industrial- and mixed-born or town-born moving from agricultural communities. However, this was a smaller proportion than for the town- or industrial- and mixed-born moving from towns and industrial and mixed communities. Given, therefore, the type of community of birth, the process of migration to Stockholm is in general as postulated; the direct moves to Stockholm from community of birth predominate among the town-born, the indirect moves from another type of community from that of birth among the agricultural-born. And, furthermore, of all indirect moves to Stockholm from each type of community of birth, the last place of residence previous to residence in Stockholm was most frequently a town.

RATE OF MIGRANTS PER 10,000
POPULATION BY DISTANCE

The number of direct moves to Stockholm from community of birth in Västmanland was greatest for towns and least for agri-

cultural communities. Was this to be explained entirely on the basis of resemblances or differences in material environments or was this due to a greater number of possible migrants from towns, as measured by their population, and to their shorter distance from Stockholm? Similarly, the number of moves indirectly to Stockholm from all towns in Sweden was greater than from any other type of community. Again, would holding population and distance constant affect this relationship? In order to hold constant these two factors, the number of migrants was related to the population living in the different types of community situated at the same relative distance from Stockholm. That is, rates of migrants per 10,000 population for the ten-year period 1930-21 were computed for the less than and more than 100 km. moves to Stockholm directly from community of birth in Västmanland. This same type of tabulation was made for all indirect moves to Stockholm from all communities in Sweden for the same distance categories. The rates of migrants per 10,000 population for direct moves from community of birth brought out even more clearly the relation between type of community of birth of residents and the process of cityward migration; for, rates of migrants per 10,000 population from agricultural communities in Västmanland directly to Stockholm were 63 for less than 100 km. moves compared to 193 from towns, and 71 per 10,000 population for more than 100 km. moves compared to 297 from towns. The rate of migrants per 10,000 population from communities other than that of birth showed again that, as type of community of in-migration to Stockholm increased in degree of industrial development, the rate of migrants increased for both less than and more than 100 km. moves to Stockholm.

CONCLUSIONS

With the statistical material collected for this study, where community of birth and community of last residence previous to residence in Stockholm for the 1930 residents of Stockholm born in Västmanland County are both given and have been classified by an index of the degree of industrial development, the problem of the relation of material environment to the amount and process of cityward migration was attacked. The results of the analysis of

these data indicate, within their scope and limitations, that the migration of this population to Stockholm confirmed this general concept of the relation of different degrees of industrial development of communities of birth to the probability as well as the process of migration to a city. For, the town-born were found to be resident more often in Stockholm than the rural-born in relation to their proportions in the whole Swedish population of 1930. The last place of residence previous to residence in Stockholm was found to be most frequently a town for migrants born in all types of community. When distance and population of the communities of last residence were held constant, the rate of migrants for two distance categories from town of birth directly to Stockholm was found to be much greater than the rate of the agricultural-born from community of birth. When the rates of the migrants were computed for migrants not moving to Stockholm directly from community of birth, the rates were again found to be from four to eight times as great from towns as from agricultural communities. And, lastly, the proportion of direct moves to Stockholm of the town-born from town of birth was more than twice as great as the proportion of direct moves of the agricultural-born. Of all indirect moves to Stockholm, the proportion for each type of community of birth was greatest from towns.

Therefore, in spite of a probably greater economic push and pull on the population of agricultural communities than on the population of the towns in Sweden, the difference in degree of industrial development, or, broadly speaking, in cultural levels between the three types of communities and Stockholm, was related to the process of migration to Stockholm in the postulated manner.

PART II

COMPARISON OF ADJUSTMENT OF
MIGRANTS TO STOCKHOLM

CHAPTER VII

THE PROBLEM AND PREDICTIONS: PROCEDURE

THE PROBLEM

THIS part of the study of cityward internal migration is concerned with the extent to which the distribution of amount of education completed, type of occupations engaged in, income received, and civil status in 1930 will reveal differences according to the type of community of birth of these 1930 Stockholm residents. For, as previously stated, each type of community is assumed to represent a different type of material environment which in turn is assumed to produce a certain set of behavior patterns in persons living in it during the formative years of life. In this part of the study the assumption that different types of community of birth produce different behavior patterns will be tested out by a comparison by type of community of birth of these four types of distributions: education, occupation, income, and civil status. For, it is postulated that the effect of the material environment of the origin of all migrations, birthplace, will not be wiped out by the migration process but will always delimit the process of change in behavior. In other words, the agricultural-born migrants in Stockholm may have changed their behavior if compared to the agricultural-born population still living in farm communities, but, compared to the town-born and industrial-born migrants also living in a city, the change has been such as to be consistent with the original assumed differences in behavior and not such as to result in a complete similarity in the distributions of behavior for all migrants after residence in a city. Consequently, with the wide range of possible adjustment offered by an urban environment, migrants from each type of community should distribute themselves in the various fields of behavior similarly to the Stockholm-born as the material environment of birthplace approaches that of Stockholm and least similarly as the type of community of birth differs from that of Stockholm. Therefore, a rural population resident in a city

is not conceived of as necessarily competing with or supplanting the urban population but as carrying on its own behavior patterns alongside of the urban population much as the immigrant population in a large city has been found to do. If, then, in this part of the study such a tendency toward the perpetuation of previous behavior patterns can be shown to exist, the importance of the degree of industrial development of birthplace in the redistribution of population will be more firmly established.

PREDICTIONS CONCERNING DIFFERENCES

Education.—If, in the majority of cases, a migrant has completed his formal education before migration to Stockholm, then education would be regarded not as a measure of the adjustment of migrants to Stockholm but as a measure of the original differences in the distribution of this factor in the different types of community of birth. In order to regard amount of education completed in 1930 as a measure of the original differences in educational distributions in different types of community of birth, two assumptions are made: that in the majority of cases education is completed before any migration and that, if migrants are selected with respect to education, the process of selection is the same for each type of community of birth. The assumption that education is completed before residence in Stockholm for the majority of migrants seems a fair assumption in view of the fact that the results of previous studies and of this study indicate that migration takes place most frequently between the ages of fifteen and thirty, when, presumably, most education has been completed. The results of some studies of the educational selection of migrants indicate that there may be a greater selection of the more highly educated for migration than of the less well educated. But, since the less well educated comprise the greatest proportion of all migrants, this selection would have little effect on the total distributions of amount of education completed. Therefore, the education completed in 1930 by migrants in Stockholm would probably reflect the distribution of levels of education in the different types of community of birth.

If it is found that the amount of education completed in 1930 does differ by type of community of birth, this would be of signifi-

cance for the following two reasons: (1) that in those social and occupational classes where education is an essential prerequisite persons born in a community type where higher education was more frequent in its population than in the population of any other community type would have an advantage in adjustment to Stockholm; (2) that since moves to Stockholm are in the majority of cases from towns (regardless of community of birth), where presumably about the same opportunities for education exist, if agricultural-born Stockholm residents still fell behind in amount of education completed in 1930, there would be good grounds for concluding that opportunities for social climbing and general occupational advancement as facilitated by education are related to type of community of birth more than to residence in a town or large city where increased educational opportunities are afforded. So that differences in education by type of community of birth would show that the range of change in behavior as related to education in a new environment is delimited by the type of community of birth for the majority of migrants.

Occupation.—In large cities there are a great many types of occupations open to the migrant. In the case of a migrant with no previous occupational or vocational training there is generally some type of occupation to be had in a city where no experience or training is needed. For the migrant with special training or specially qualified through education, there are the higher occupational classes open to him, or, when previous experience is the prerequisite, more skilled occupations. However, since the type of experience, the opportunities for special training, and higher education are all assumed to be related to type of community of birth as a measure of previous opportunity or experience, a comparison of the distribution of types of occupations by type of community of birth should reveal differences in the proportions in the skilled occupations, the clerical, and professional occupations, and possibly the unskilled occupations. The agricultural-born persons being most handicapped with respect to experience, vocational training, and education would be found most frequently among the unskilled and semiskilled workers; the industrial-born having experience rather than education or special training would be found in the skilled occupations; the town-

born, having perhaps the greatest educational advantages, would be found in clerical occupations, the professions, and possibly business. Therefore, if differences with regard to the type of occupation are disclosed by a classification of migrants by type of community of birth, these differences are presumably a reflection of differences in occupational distributions for different community types plus the differences in adaptation to Stockholm resulting from this difference in basic adaptations to a previous environment. In other words, the occupational distribution by type of community of birth will reveal not only the most frequent types of occupations within the population from which the migrants were drawn but also, as notably in the case of agricultural-born migrants where many of these occupational patterns are not duplicated in a city environment or no occupational pattern has been established previous to residence in Stockholm, the type of occupation most suited to the background of the migrant.

Civil status.—If there is any validity to the assumption that a person on the average spends the formative period of life in his community of birth and that different types of community of birth are related to differences in behavior patterns, then an analysis of civil status by type of community of birth for this sample of Stockholm residents should verify this assumption. For, as previously stated, it is assumed that the behavior patterns for each type of community of birth should continue to delimit the range of change of behavior in any environment. In other words, the town-born should have a marriage rate similar to the Stockholm-born, and both these rates should be either greater or less than the agricultural-born rates. Whether the town-born marriage rate will be greater or less than the agricultural-born marriage rate could be determined empirically by an examination of the population of an agricultural community and a town by studying the native inhabitants of the two types of community and then holding constant sex ratio and age distribution. However, this was not done.

Migrants resident in Stockholm are all subject to the same sex ratio, and age distribution may be easily held constant; so that any differences in marriage rates by type of community of birth will not be caused by these two factors. On the grounds that the farm com-

munity is composed almost entirely of family units and members of families, and that the economic and social organization revolves around the family and its members with little place for the single unattached person as in a town, the marriage rate might be predicted to be greater among the agricultural-born than among the town-born.

Income.—The comparison of income distributions by type of community of birth should give an idea of the differences in economic status as measured by income. This comparison will not, of course, give an idea of the improvement in economic status attendant upon residence in a city over residence in agricultural communities or towns of birth. This analysis should show differences if the educational and occupational differences predicted affect enough of the migrants so that the income distributions of these migrants are a considerable part of the total distribution for a given type of community. If the average income for a given type of occupation by type of community of birth could have been computed and these averages compared for significant differences, a much more conclusive type of analysis would have resulted. But, in view of the small samples which would result when other factors such as age and length of residence in Stockholm are held constant, this was not possible.

PROCEDURE

Three factors—length of residence, age in 1930, and sex—were held constant in the analysis of the distributions of the amount of education completed in 1930, the type of occupation, the size of income, and civil status in 1930 by type of community of birth of the Västmanland-born 1930 Stockholm population. There were 14,976 Västmanland-born Stockholm residents with complete data with respect to place of birth and date of in-migration.¹ Therefore, the size of the sample necessitated a choice of age groups and length of residence groups which would result in samples adequate for statistical analysis by type of community of birth and each of the four measures of adjustment to Stockholm. Four age groups—less than 20, 20 to 29, 30 to 44, and 45 years and over, were used, with

¹ I.e., 1,322 of the total number of cases, 16,302, had no date of in-migration, 3 cases no place of birth which could be found as a community, and 1 case missing.

subclassification by four lengths of residence groups—less than 4 years' residence in Stockholm, 4 to 11, 11 to 21, and 21 years or more.

Table 13 gives the distribution of the sample by sex into the 4×4 fold table resulting from a cross-tabulation of age in 1930 by

TABLE 13
1930 STOCKHOLM POPULATION BORN IN VÄSTMANLAND
COUNTY BY AGE IN 1930, LENGTH OF RESIDENCE
IN STOCKHOLM, AND SEX

AGE IN 1930	LENGTH OF RESIDENCE BY DATES OF IN-MIGRATION				TOTAL
	1930-28	1927-21	1920-10	1909-1860*	
	Males				
Less than 20	284	258	66	.....	608
20-29	586†	578†	156	46	1,366
30-44	360	802†	736†	316	2,214
45 and over	160	369	407	1,346†	2,282
Total	1,390	2,070	1,365	1,708	6,470
	Females				
Less than 20	474	307	75	.....	856
20-29	911†	1,069†	242†	48	2,270
30-44	414	871†	1,021	445	2,751
45 and over	213	359	491	1,566†	2,629
Total	2,012	2,606	1,829	2,059	8,506
Grand total	3,402	4,613	3,194	3,767	14,976

* Actually there were four in-migrants before 1860: one in 1859, two in 1856, and one in 1848.

† Indicates the compartments analyzed.

length of residence in Stockholm. From the sixteen compartments for each sex only five age and length of residence groups contained enough cases to give after tabulation by type of community of birth (4 classes) and one of the other factors (in some cases as many as 6 classes) samples large enough for the calculation of proportions of any statistical significance (i.e., at least 30 cases in a class).

Table 14 is constructed to show the upper and lower age limits at in-migration as defined by the age and length of residence groups of Table 13. It will be noted that the greatest number of cases are

TABLE 14

AGE AT IN-MIGRATION AS DETERMINED BY FOUR AGE AND LENGTH
OF RESIDENCE GROUPS FOR VÄSTMANLAND-BORN
1930 STOCKHOLM POPULATION

AGE GROUPS	LENGTH OF RESIDENCE GROUPS			
	Less than 4 Years	4-10 Years	11-20 Years	21 Years and Over
Less than 20.....	0-19	3-16	0-10	.....
20-29.....	17-29*	10-26*	0-20	0-8
30-44.....	27-44	20-40*	10-35*	0-23
45 and over.....	42 and over	35-82	25-70	0-60*

* These age and length of residence groups were analyzed.

found in those compartments in Table 13 where the age limits at in-migration as shown in Table 14 are roughly 15-30 years. However, in the 45 years and over group for migrants with 21 years' or more residence in Stockholm, the age at in-migration is not limited at all, that is, age at in-migration may have been at less than a year up to 60 years of age. But, in order to account for the large group of cases in this compartment, the age at in-migration must have been most frequently between 15-30 years. An actual tabulation of age at in-migration of males for this group gave the following distribution:

Age at In-Migration	Number of Cases
0-15.....	71
15-30.....	1,042
30-45.....	205
45-60.....	26
60+.....	2
Total.....	1,346

The average age at in-migration was 24 for the foregoing frequency distribution. Therefore, age at in-migration is within broad limits held constant by the use of the five compartments for each sex with the greatest number of cases given in Table 13.

The one factor which remains to be held constant is the type of community of residence previous to residence in Stockholm. The reason for holding constant this factor would be partially to segregate those migrants who moved from community of birth to a community of a different type at a very early age. In such cases the type of community of birth would not necessarily be representative of the type of environment to which adjustment had been made during the formative years of life. For this reason it would be best to study the adjustment to Stockholm of persons who showed previous residence in only one type of community as compared to persons with previous residence in different types of community. In order to hold constant the factor of type of place of residence previous to residence in Stockholm, it would be necessary to subdivide the persons born in each type of community in each age and length of residence group by the four possible types of community of last residence and then proceed to analyze each of the resulting groups by one of the four measures of adjustment to Stockholm. In view of the size of the samples, this was not possible. Therefore, if the analysis of the distributions by type of community of birth of income, education, occupation, and civil status do reveal differences as predicted, the influence of types of community of last residence previous to residence in Stockholm upon these differences, either in the direction of increase or in the direction of decrease, will not be known.

CHAPTER VIII

COMPARISON OF AMOUNT OF EDUCATION COMPLETED IN 1930 BY TYPE OF COMMUNITY OF BIRTH

IN THE 1930 Swedish census, information with regard to the amount of education completed in 1930 was tabulated into nine classifications numbered as follows: (1) not able to read or write; (2) able to read but not write; (3) able to read and write but no schooling; (4) completed grammar school or its equivalent (i.e., attended a special school for mentally or physically disabled children); (5) completed some general education in addition to elementary school or some elementary special training; (6) completed some high school without matriculating or some higher special training; (7) passed matriculation examination; (8) a degree from an institution other than a university (i.e., a degree from a veterinary college, library school, or school of dentistry); (9) degree from a university. If no return for education was made, the letter y was placed in the education column.¹

For the purposes of this study this ninefold classification was condensed into four classes of amount of education completed. The first class contains all persons who had not attended school (1, 2, and 3 of the census classification), the second class all persons who had completed elementary school or its equivalent (4 of the census classification), the third class those who had completed some schooling in addition to elementary school but had not completed high school (5 and 6 of census classification), and the last class all who had matriculated either in high school or had university or higher special training (7, 8, and 9 of the census classification). It must be noted that to have matriculated from a Swedish high school is practically equivalent to completion of the first two years of an American university or college course. The four educational levels

¹ *Statistisk årsbok för Stockholms stad. 1934, tab. 22.*

outlined above will be referred to briefly in the tables to follow as: no schooling, completed grammar school, completed some high school, and completed high school or university.

The standard error of each percentage has been computed.² When three times the standard of error of the difference³ of any two percentages is less than the actual difference between the percentages, an *S* has been placed above the percentage which is significantly different from any other percentage in the same row.

The percentage distributions of the amount of education completed in 1930 by type of community of birth for each of the five age and length of residence groups for males and females to be analyzed in this chapter should show that the distribution of the amount of education completed by the town-born is consistently different from the educational distributions for the industrial- and agricultural-born. For, it is assumed that each type of community of birth is related to differences in educational opportunities and therefore is responsible for delimiting the future range of behavior in an urban environment in so far as education is a delimiting factor. And, thereby, also show that, no matter what have been or will be the subsequent places of residence after birthplace, the behavior patterns of community of birth persist in whatever environment the migrant takes up residence.

Table 15 gives the amount of education completed in 1930 by males in the age group 20-29 for three types of community of birth. In the less than 4 years' length of residence group the proportions of all town-born, industrial-born, and agricultural-born who had completed more than grammar school were 38, 20, and 17 per cent, respectively. In each of the two higher education groups the town-born proportion is greater than either the agricultural- or industrial-born proportions, but the number of cases in any one of these two higher education groups is so small as to make the percentages hardly reliable statistically. In the 4 to 11 year length of residence

² By the formula: standard error = $\sqrt{\frac{p_1 q_1}{n_1}}$, where p_1 = percentage, $q_1 = 100 - p_1$, and n_1 = number of cases.

³ By the formula: standard error of difference = $\sqrt{\frac{p_1 q_1}{n_1} + \frac{p_2 q_2}{n_2}}$.

group the proportions of all town-born, industrial-born, and agricultural-born who had completed more than grammar school were $33\frac{1}{2}$, $19\frac{1}{2}$, and 22 per cent, respectively. Again the town-born pro-

TABLE 15

PERCENTAGE DISTRIBUTIONS FOR AGE GROUP 20-29, MALES, OF AMOUNT OF EDUCATION COMPLETED 1930 BY TYPE OF COMMUNITY OF BIRTH AND LENGTH OF RESIDENCE FOR VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION

PERCENTAGE WHO HAD COMPLETED	TYPE OF COMMUNITY OF BIRTH			
	Agriculture	Mixed	Industry	Towns
A. Less than 4 Years' Residence in Stockholm				
Grammar school.....	83.33(± 3.24)*	.....	79.70(± 3.51)*	S† 62.22(± 3.61)*
Some high school.....	11.36(± 2.76)*	.....	15.04(± 3.10)*	24.44(± 3.20)*
High school or university	5.30(± 1.80)*	.....	5.26(± 1.94)*	13.33(± 2.53)*
Total.....	100.00	.....	100.00	100.00
Number of cases.....	132	37	133	180
Education not recorded..	29	7	33	35
Grand total.....	161	44	166	215
B. 4-10 Years' Residence in Stockholm				
Grammar school.....	77.86(± 3.51)*	.....	80.57(± 3.36)*	S† 66.49(± 3.42)*
Some high school.....	21.43(± 3.47)*	.....	16.55(± 3.15)*	27.23(± 3.06)*
High school or university	0.71(± 0.71)*	.....	2.88(± 1.42)*	6.28(± 1.74)*
Total.....	100.00	.....	100.00	100.00
Number of cases.....	140	24	139	191
Education not recorded..	24	7	25	28
Grand total.....	164	31	164	219

* Standard error of percentage.

† See p. 70.

portions in the two highest education groups are greater than the industrial- and agricultural-born proportions. The results do not show so far, as predicted, that the industrial-born have significantly different educational proportions from the agricultural-born.

Table 16 makes possible a comparison of the Västmanland town-born population of Stockholm with the total 1930 population of Stockholm as to proportions of each population having completed the three levels of education. Thirty-seven and one-half percent

TABLE 16*

PERCENTAGE DISTRIBUTIONS OF AMOUNT OF EDUCATION COMPLETED
1930 BY POPULATION OF STOCKHOLM IN 1930 OVER 20 YEARS
OF AGE BY AGE GROUPS AND SEX

PERCENTAGE WHO HAD COMPLETED	AGE GROUPS					
	Males			Females		
	20-29	30-44	45 and Over	20-29	30-44	45 and Over
	20-29	30-44	45 and Over	20-29	30-44	45 and Over
Grammar school.....	62.20	64.63	68.35	69.66	74.28	74.27
Some high school.....	26.93	23.45	21.23	27.99	23.70	23.24
High school or university..	10.82	11.86	10.15	2.32	1.96	1.01
No schooling.....	0.05	0.06	0.27	0.02	0.05	1.38
Total.....	100.00	100.00	100.00	99.99	99.99	100.00
Number of cases.....	41,484	54,742	52,878	55,990	67,959	73,981

* See *Statistisk årsbok för Stockholms stad*, 1934, tab. 22.

of the population of Stockholm 20-29 years of age in 1930 had completed more than grammar school as compared to 38 and 33 per cent of the town-born Västmanland population in the less than 4 year and 4 to 11 year residence groups, respectively. Furthermore, Table 17 indicates that 47 per cent of all persons 20-29 years of age living in Stockholm were Stockholm-born. Therefore, it seems fair to assume that the town-born population is much better able to compete with the Stockholm-born population as far as education is concerned than either the agricultural- or industrial-born.

Table 18 gives the same proportions for women as Table 15 did for men. In the less than 4 years' residence group the proportion of all town-born, industrial-born, and agricultural-born who had completed more than grammar school were 29, 11½, and 17 per cent, respectively, as compared to 20½, 9, and 10 per cent, respectively, for the 4 to 11 years' residence group. Among women, also, the

town-born have a significantly greater proportion who have completed more than grammar school than either the industrial-born or the agricultural-born, although the proportions are smaller than the corresponding proportions for men. Comparing the town-born proportions with the corresponding proportions for the total Stockholm population in this same age group (Table 16), the proportions in the three levels of education are $69\frac{1}{2}$, 28, and 2 per cent reading from the grammar school to university education classes for the Stockholm population. The town-born proportions in the less than

TABLE 17*

STOCKHOLM-BORN POPULATION OF STOCKHOLM IN 1930 OVER 20 YEARS
OF AGE AS PERCENTAGE OF TOTAL STOCKHOLM POPULATION
1930 BY AGE GROUPS AND SEX

AGE 1930	MALES		FEMALES	
	Total Population	Percentage Stockholm- born	Total Population	Percentage Stockholm- born
20-29.....	46,413	46.51	62,114	35.15
30-44.....	60,760	33.97	74,992	29.20
45 and over.....	59,609	19.97	82,744	21.78
Total.....	166,782	32.46	219,850	28.09

* See *Statistisk årsbok för Stockholms stad*, 1934, tab. 24.

4 years' residence group compare very favorably, that is, 71, 27, and 2 per cent for the three education classes. The longer residence group compares less closely with the Stockholm population. Nevertheless, with 35 per cent of the female population of Stockholm 20-29 years of age born in Stockholm, the town-born woman as well as man is undoubtedly on a more equal educational footing with the Stockholm-born population than the agricultural- or industrial-born.

Table 19 gives the distribution of education completed in 1930 for men in the 30-44 year age group. In this age group the proportion of the industrial-born who had completed more than grammar school now occupies a more intermediate position with respect to the proportion of agricultural-born, on the one hand, and the

proportion of the town-born, on the other hand, and is not, as in the 20-29 year age group, practically the same as the agricultural-

TABLE 18

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 20-29, FEMALES, OF AMOUNT OF EDUCATION COMPLETED 1930 BY TYPE OF COMMUNITY OF BIRTH AND LENGTH OF RESIDENCE FOR VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION

PERCENTAGE WHO HAD COMPLETED	TYPE OF COMMUNITY OF BIRTH			
	Agriculture	Mixed	Industry	Towns
A. Less than 4 Years' Residence in Stockholm				
Grammar school.....	82.76(± 2.48)*	.....	88.50(± 1.88)*	S from $I^\dagger$ 71.15(± 3.14)*
Some high school.....	17.24	.....	11.15(± 1.86)*	26.92(± 3.07)*
High school or university	0.00	.....	0.35	1.93
Total.....	100.00	.....	100.00	100.00
Number of cases.....	232	61	287	208
Education not recorded..	38	9	43	33
Grand total.....	270	70	330	241
B. 4-10 Years' Residence in Stockholm				
Grammar school.....	90.30(± 1.81)*	.....	90.65(± 1.63)*	$S^\dagger$ 79.52(± 2.36)*
Some high school.....	9.70	.....	8.72(± 1.57)*	18.09(± 2.25)*
High school or university	0.00	.....	0.62	2.39
Total.....	100.00	.....	100.00	100.00
Number of cases.....	268	57	321	293
Education not recorded..	35	6	51	38
Grand total.....	303	63	372	331

* Standard error of percentage.

† See p. 70.

born proportion. This is the relationship which would be expected on the basis of the differences in degree of industrial development for the three types of community. This relationship is especially marked in the 11 to 21 year residence group, where the proportions

of all agricultural-, industrial-, and town-born who have completed more than grammar school are 23, 31, and 39 per cent, respectively.

TABLE 19

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 30-44, MALES, OF AMOUNT OF EDUCATION COMPLETED 1930 BY TYPE OF COMMUNITY OF BIRTH AND LENGTH OF RESIDENCE FOR VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION

PERCENTAGE WHO HAD COMPLETED	TYPE OF COMMUNITY OF BIRTH			
	Agriculture	Mixed	Industry	Towns
A. 4-10 Years' Residence in Stockholm				
Grammar school.....	81.57(±2.43)*	.....	75.91(±2.88)*	S† 64.22(±3.36)*
Some high school.....	16.08(±2.30)*	.....	15.91(±2.47)*	22.55(±2.93)*
High school or university	2.35(±0.95)*	.....	8.81(±1.85)*	13.25(±2.37)*
Total.....	100.00	.....	100.00	100.00
Number of cases.....	255	46	220	204
Education not recorded..	35	4	21	17
Grand total.....	290	50	241	221
B. 11-20-Years' Residence in Stockholm				
Grammar school.....	76.16(±2.56)*	.....	68.99(±3.68)*	S from A† 61.24(±3.37)*
Some high school.....	16.61(±2.24)*	.....	20.25(±3.20)*	26.32(±3.05)*
High school or university	7.22(±1.56)*	.....	10.76(±2.47)*	12.44(±2.28)*
Total.....	100.00	.....	100.00	100.00
Number of cases.....	277	47	158	209
Education not recorded..	16	6	11	12
Grand total.....	293	53	169	221

* Standard error of percentage.

† See p. 70.

The Stockholm population in the same age group has a distribution of education such that about the same proportion have completed some schooling beyond grammar school as for either length of resi-

dence group of the Västmanland town-born population, 35 per cent as compared to 36 and 39 per cent, respectively.

TABLE 20

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 30-44, FEMALES, OF AMOUNT OF EDUCATION COMPLETED 1930 BY TYPE OF COMMUNITY OF BIRTH AND LENGTH OF RESIDENCE FOR VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION

PERCENTAGE WHO HAD COMPLETED	TYPE OF COMMUNITY OF BIRTH			
	Agriculture	Mixed	Industry	Towns
	A. 4-10 Years' Residence in Stockholm			
Grammar school.....	86.80(± 2.14)*	.....	89.90(± 2.11)*	S† 75.55(± 2.84)*
Some high school.....	12.80(± 2.11)*	.....	10.91(± 2.11)*	20.96(± 2.69)*
High school or university	0.40	.....	0.00	3.49
Total.....	100.00	.....	100.00	100.00
Number of cases.....	250	63	220	229
Education not recorded..	37	10	35	27
Grand total.....	287	73	255	256
	B. 11-20 Years' Residence in Stockholm			
	Agriculture	Mixed	Industry	Towns
Grammar school.....	87.30(± 1.88)*	.....	89.55(± 1.81)*	S† 75.70(± 2.54)*
Some high school.....	11.75(± 1.81)*	.....	10.10(± 1.78)*	21.48(± 2.44)*
High school or university	0.95	.....	0.35	2.82
Total.....	100.00	.....	100.00	100.00
Number of cases.....	315	60	287	284
Education not recorded..	31	6	16	22
Grand total.....	346	66	303	306

* Standard error of percentage.

† See p. 70.

Table 20 gives the educational distribution for women comparable to that for men given in Table 19. Unlike the proportion of men born in industrial communities who have completed more than grammar school, the industrial-born proportion for women is not

any greater than the agricultural-born proportion but, in fact, somewhat less. In so far as the educational level of community of birth is reflected in the educational distributions for the agricultural- and industrial-born women resident in Stockholm, there is no difference apparently in the levels of education in these two types of community. That is, while the proportion of all town-born who have completed more than grammar school is 24 per cent, the proportion

TABLE 21

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 45 YEARS AND OVER, MALES, OF AMOUNT OF EDUCATION COMPLETED 1930 BY TYPE OF COMMUNITY OF BIRTH FOR VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION WITH 21 YEARS' OR MORE RESIDENCE

PERCENTAGE WHO HAD COMPLETED	TYPE OF COMMUNITY OF BIRTH			
	Agriculture	Mixed	Industry	Towns
Grammar school.....	79.39(± 1.62)*	.....	83.67(± 2.65)*	70.61(± 2.65)*
Some high school.....	16.91(± 1.50)*	.....	12.35(± 2.08)*	19.26(± 2.29)*
High school or university	2.90(± 0.67)*	.....	3.58(± 1.17)*	9.46(± 1.70)*
No schooling.....	0.80	.....	0.40	0.67
Total.....	100.00	.....	100.00	100.00
Number of cases.....	621	88	251	296
Education not recorded..	40	3	18	29
Grand total.....	661	91	269	325

* Standard error of percentage.

† See p. 70.

of all agricultural-born in this education group is only $12\frac{1}{2}$ per cent, and of all industrial-born 11 per cent. Again the town-born proportions are almost identical to the total Stockholm proportions.

Table 21 gives the amount of education completed 1930 by men age 45 years and over with 21 years' or more residence in Stockholm. For the first time there is a small proportion, less than 1 per cent, in the group with no schooling. The differentiation of the industrial-born proportions from the agricultural-born proportions found in the 30-44 year age group has disappeared, but the proportion of the town-born who have completed more than grammar school, $28\frac{1}{2}$ per cent, though still significantly greater than the corresponding pro-

portions for the agricultural- and industrial-born, is somewhat smaller than the proportions in this education class for the two younger age groups. This holds true for the proportions for the whole Stockholm population as well.

Table 22 for women reveals that the proportion of women 45 years and over and resident in Stockholm more than 21 years have practically no cases of high-school or university education—fewer

TABLE 22

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 45 YEARS AND OVER, FEMALES, OF AMOUNT OF EDUCATION COMPLETED 1930 BY TYPE OF COMMUNITY OF BIRTH FOR VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION WITH 21 YEARS' OR MORE RESIDENCE

PERCENTAGE WHO HAD COMPLETED	TYPE OF COMMUNITY OF BIRTH			
	Agriculture	Mixed	Industry	Towns
Grammar school.....	88.46(± 1.28)*	.....	89.41(± 1.72)*	$S^{\dagger}$ 77.94(± 2.03)*
Some high school.....	9.77(± 1.19)*	.....	9.34(± 1.63)*	20.86(± 1.9)*
High school or university	0.00	.....	0.00	0.72
No schooling.....	1.76	.....	1.25	0.48
Total.....	100.00	.....	100.00	100.00
Number of cases.....	624	97	321	417
Education not recorded..	50	8	25	24
Grand total.....	674	105	346	441

* Standard error of percentage.

$\dagger$ See p. 70.

cases, in fact, than of persons with no schooling. The paucity of cases of high-school matriculation or university education for the agricultural- and industrial-born women has been evident in all age and length of residence groups: the few such cases which did appear were almost invariably among the town-born. This is also the case for the Stockholm population in all age groups as well.

SUMMARY

The percentage distributions of amount of education completed in 1930 by either sex show that migrants born in towns have consistently more persons proportionately, regardless of age in 1930 or

length of residence in Stockholm, who have had some schooling beyond the grammar-school level than either migrants born in industrial communities or migrants born in agricultural communities. The proportions of the industrial-born falling in each of the three educational classes is not, as predicted, significantly differentiated from the agricultural-born proportions. In the case of men there is some indication in the 30-44 year age group that such differences do exist.

The town-born distribution of education was similar to that for the total population of Stockholm in 1930. Since the Stockholm population is composed of about 60 per cent Stockholm-born and town-born persons, it seems fair to assume that the Stockholm-born educational distribution is more similar to that of the town-born, if not actually showing a higher proportion in the higher educational groups than the town-born, than to the agricultural-born. And, therefore, there is reason to conclude that each type of community of birth has a distinct distribution of levels of education which is reflected by these residents of Stockholm. In so far as education is a facilitating factor in social and economic advancement, the town-born compete on an equal level with the Stockholm-born and have a distinct advantage over the agricultural- and industrial-born. Therefore, the material environment of community of birth of migrants would seem to have a delimiting effect upon the possible range of behavior as related to education.

However, for the majority of Västmanland-born migrants—60-80 per cent of all men and 70-90 per cent of women—there has been no education above the grammar-school level, and, in so far as education beyond this level is a factor in differentiating their behavior in Stockholm, there will be no grounds for expecting differences.

CHAPTER IX

COMPARISON OF TYPE OF OCCUPATION AND INCOME BY TYPE OF COMMUNITY OF BIRTH

THE Swedish census material gave information as to the main occupation and subsidiary occupation in 1930 and the main occupation in 1925. The information on main occupation in 1930 was the specific type of occupation engaged in, in the words of the person who filled out the census return, as, for instance, saddlemaker, locomotive engineer, streetcar conductor, etc. In other words, there was no attempt at a classification of occupations in any sense. The specificity of the occupations recorded made it possible to classify the occupations by any type of classification desired. There were, of course, some cases where the occupation recorded was not as specific as the foregoing examples, for instance, the occupation was recorded as that of a railway employee or as a factory worker. Certain fixed rules were adopted for dealing with such cases.

The information concerning occupation in 1925 indicated, in general, that there had been no change in occupation up to 1930, or else no information at all was recorded. If the sample in this study had been sufficiently large, the data on occupation in 1925 should have yielded information regarding type of occupation previous to residence in Stockholm as compared to type of occupation in 1930 for migrants whose date of in-migration was 1926 or later. But as it turned out only one age group, 20-29 years, was analyzed with less than 4 years' residence in Stockholm. In this age group the majority of returns gave no information with regard to occupation in 1925. Therefore, no use could be made of these occupational data.

The main occupation in 1930 was classified into types on the basis of the occupational classification used by Margaret H. Hogg in her survey of *The Incidence of Work Shortage*,¹ made in New

¹ New York: Russell Sage Foundation, 1932.

Haven, Connecticut, during May-June, 1931, and repeated in 1933. Her occupational classification distinguished nine types of occupation. For the purposes of this study it was necessary to condense this ninefold classification into a sixfold one. The six classes of occupation used were: (1) unskilled laborers, including domestic servants and agricultural laborers or farmers; both listed as separate types in the Hogg classification; (2) semi-skilled workers; (3) skilled workers; (4) clerks and kindred workers; (5) proprietors, officials, and managers; and (6) professions, including musicians and teachers of music, actors, and showmen, who were classified as entertainment in the Hogg classification.

It was assumed that the degree of accessibility of an occupation decreased as the type of occupation changed from the unskilled to the professional classification. Furthermore, a formal education was not considered an important factor in the accessibility of the unskilled, semiskilled, or skilled occupations; but formal education was considered a definite factor in the accessibility of the clerical and professional occupations and, to a somewhat less easily defined extent, also in the proprietors, managers, and officials occupational class. It was further assumed in the occupational classes where formal education was not an important prerequisite that, by holding the length of residence in Stockholm constant, experience in Stockholm had been held constant. Therefore, differences in the distribution of migrants into the different types of occupation would reflect the type of occupational experience to be had in the community of birth. The differences in possible types of occupational experience typical of community of birth might, of course, to some extent be counteracted by individual differences in mental and physical makeup. But, by and large, these latter differences should not be greater than the occupational patterns typical of a given type of community of birth.

In the discussion to follow on the percentage distributions of type of occupation for men by type of community of birth, the term "white-collar occupation" will be used to refer to the clerical and kindred workers; proprietors, officials, and managers; and professional occupational classes. "Wage-earners' occupations" will refer to the unskilled, semiskilled, and skilled occupations.

A rough division of all occupations into white-collar and wage-earner classes was made to hold constant to some degree the effect of education upon type of occupation. There is undoubtedly much overlapping with regard to level of education between the two main occupational divisions, especially in the clerks and kindred workers and also in the business, proprietors, and officials class. The person who has completed some schooling beyond grammar school will undoubtedly also be found in the wage-earners' occupational classes. In fact, a cross-tabulation of education and occupation² showed that about 10 per cent of the wage-earners had completed more than grammar school, while from 50 to 70 per cent of the white-collar class had had some schooling beyond the level of grammar school. So that, by treating the wage-earner occupational classes separately, the effect of education will be largely eliminated. Furthermore, 60-80 per cent of all migrants who had gone beyond grammar school in their education fell in the white-collar occupational classes. So that the greater the proportion in the higher educational classes for any type of community of birth, the greater will be the proportion of all migrants in the three upper occupational classes.

OCCUPATIONAL DISTRIBUTIONS FOR MEN

In the discussion of Tables 23, 24, and 25 for six types of occupations of males by type of community of birth, attention will be directed at the proportions in the three white-collar occupations, namely, clerks and kindred workers; proprietors, managers, and officials; and the professions, since the wage-earners' occupations will be treated as a separate group later. In these tables if there were a one-to-one correlation between amount of education completed and entrance into the white-collar occupations, there would be every reason to expect that the town-born proportions in the white-collar occupations would be greater than the agricultural- or industrial-born proportions in view of the results of the analysis of the educational distributions by type of community of birth. However, it is obvious that no such rigid relationship between these occupations and education exists. This is especially true with respect

² This cross-tabulation was done for the 45 years and over age group for males with more than 21 years' residence for each type of community of birth.

to the occupational class clerks and kindred workers. Therefore, these proportions should to some extent also reveal differences due to the influence of the type of material environment of birthplace. For, the office work of an unskilled or skilled nature included under the classification clerical workers as well as the occupation of working in a store would seem to be rather typical of the urban environment and, therefore, least suited to the previous experience of the agricultural-born person. Because of the small size of the samples analyzed in this study, it was not possible to separate the clerical worker with special training or educational training above that of a grammar-school level from the unskilled or untrained workers; only the sum total effect of education and previous experience will be reflected in the proportions in the clerical occupations by type of community of birth.

Tables 23, 24, and 25 give the percentage distributions by type of community of birth of the type of occupations of the Västmanland-born makes resident in Stockholm in 1930 for five age and length of residence groups.

Considering the proportions for each type of community of birth in the white-collar occupations, it is quite evident that the clerical proportions are the only proportions based upon enough cases to reveal any consistent relationships, especially in the 20-29 and 30-44 year age groups. The town-born proportions in the clerical occupations are consistently greater than the agricultural-born proportions and, with one exception, greater than the industrial-born proportions as shown by the proportions below:

Age Group	Length of Residence (Years)	Town-born	Industrial-born	Agricultural-born
20-29.....	Less than 4	23	22	14½
20-29.....	4-10	22	12	8
30-44.....	4-10	26½	12½	10
30-44.....	11-20	28½	20½	15
45 and over.....	21 and more	17½	13	15½

In only one age group does the industrial-born proportion in the clerical occupations take the intermediate position between the

town- and agricultural-born proportions to be anticipated, namely, in the 30-44 age group, 11-20 years' residence in Stockholm. On the

TABLE 23

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 20-29, MALES, OF TYPE OF OCCUPATION BY TYPE OF COMMUNITY OF BIRTH AND LENGTH OF RESIDENCE FOR VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION

TYPE OF OCCUPATION 1930	TYPE OF COMMUNITY OF BIRTH			
	Agriculture	Mixed	Industry	Towns
A. Less than 4 Years' Residence in Stockholm				
Unskilled.....	21.38(± 3.25)*	.....	16.15(± 2.90)*	15.87(± 2.53)*
Semiskilled.....	22.64(± 3.32)*	.....	16.77(± 2.94)*	19.71(± 2.76)*
Skilled.....	37.73(± 3.84)*	.....	41.61(± 3.89)*	33.65(± 3.28)*
Clerical.....	14.47(± 2.79)*	.....	21.74(± 3.25)*	23.08(± 2.92)*
Proprietors.....	1.89	.....	0.00	0.00
Professions.....	1.89	.....	3.73	7.69
Total.....	100.00	.....	100.00	100.00
Number of cases.....	159	.....	161	208
No occupation.....	2	.....	5	7
Grand total...	161	44	166	215
B. 4-10 Years' Residence in Stockholm				
Unskilled.....	13.66	.....	16.35	12.38
Semiskilled.....	34.78(± 3.70)*	.....	22.01(± 3.28)*	22.86(± 2.90)*
Skilled.....	36.65(± 3.80)*	.....	44.65(± 3.94)*	35.71(± 3.31)*
Clerical.....	8.07(± 2.15)*	.....	11.95(± 2.57)*	22.38(± 2.88)*
Proprietors.....	0.62	.....	0.63	0.48
Professions.....	6.21	.....	4.40	6.19
Total.....	100.00	.....	100.00	100.00
Number of cases.....	161	.....	159	210
No occupation.....	3	.....	5	9
Grand total...	164	31	164	219

* Standard error of percentage.

whole, then, the industrial-born proportions reveal the intermediate type of classification of industrial communities by their fluctuations between the town- and agricultural-born proportions, as was the

case in the education proportions. However, the town- and agricultural-born proportions are consistently different as well as in

TABLE 24

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 30-44, MALES, OF TYPE OF OCCUPATION BY TYPE OF COMMUNITY OF BIRTH AND LENGTH OF RESIDENCE FOR VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION

TYPE OF OCCUPATION 1930	TYPE OF COMMUNITY OF BIRTH			
	Agriculture	Mixed	Industry	Towns
A. 4-10 Years' Residence in Stockholm				
Unskilled.....	21.60(±2.43)*	.....	15.13(±2.32)*	10.50(±2.07)*
Semiskilled.....	16.38(±2.18)*	.....	7.98(±1.76)*	7.31(±1.76)*
Skilled.....	43.21(±2.92)*	.....	50.00(±3.24)*	38.36(±3.29)*
				S†
Clerical.....	10.10(±1.88)*	.....	12.60(±2.15)*	26.48(±2.98)*
Proprietors.....	3.48	.....	5.04	4.11
Professional.....	5.23(±1.31)*	.....	9.24(±1.88)*	13.24(±2.29)*
Total.....	100.00	.....	99.99	100.00
Number of cases.....	287	.....	238	219
No occupation.....	3	.....	3	2
Grand total...	290	50	241	221
B. 11-20 Years' Residence in Stockholm				
Unskilled.....	16.49(±2.18)*	.....	15.66(±2.82)*	9.63(±2.00)*
Semiskilled.....	17.18(±2.21)*	.....	6.63(±1.93)*	14.22(±2.37)*
Skilled.....	35.74(±2.81)*	.....	46.38(±3.87)*	32.11(±3.16)*
				S from A†
Clerical.....	15.12(±1.48)*	.....	20.48(±3.12)*	28.44(±2.46)*
Proprietors.....	6.87	.....	3.01	7.80
Professions.....	8.59	.....	7.83	7.80
Total.....	100.00	.....	100.00	100.00
Number of cases.....	291	.....	166	218
No occupation.....	2	.....	3	3
Grand total...	293	53	169	221

* Standard error of percentage.

† See p. 70.

some cases being statistically significantly different to lead to the conclusion that type of community of birth either through differ-

ences in educational opportunities or through occupational preferences and training is a determining influence in the relative number of migrants falling within the occupational class clerical and kindred workers.

In any age or length of residence group the proportions of migrants, regardless of type of place of birth, in the professional class are very small. The proportions of the town-born in this occu-

TABLE 25

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 45 YEARS AND OVER, MALES, OF TYPE OF OCCUPATION BY TYPE OF COMMUNITY OF BIRTH FOR VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION WITH 21 YEARS' OR MORE RESIDENCE

TYPE OF LAST OCCUPATION*	TYPE OF COMMUNITY OF BIRTH			
	Agriculture	Mixed	Industry	Towns
Unskilled.....	23.01	.....	19.46	19.24
Semiskilled.....	12.91(±1.32)†	.....	12.98(±2.05)†	7.57(±1.49)†
Skilled.....	37.64(±1.91)†	.....	44.27(±3.07)†	37.22(±2.74)†
Clerical.....	14.62(±1.39)†	.....	12.98(±2.05)*	17.67(±2.14)*
Proprietors.....	8.86	.....	8.02	11.36
Professions.....	2.95	.....	2.29	6.94
Total.....	100.00	.....	100.00	100.00
Number of cases.....	643	.....	262	317
No occupation.....	18	.....	7	8
Grand total...	661	91	269	325

* Many cases were of retired men who gave last occupation rather than 1930 occupation.

† Standard error of percentage.

pational class vary from 6 to 13 per cent, the industrial- and agricultural-born proportions both vary from 2 to 9 per cent. The town-born proportion is, in general, as was to be expected on the basis of the town-born educational proportions in the high-school or university class, greater than the industrial- and agricultural-born proportions. In view of the small number of cases in the professional classes, the differences are not significant or entirely in the same direction.

The number of cases and the proportions as well in the proprietors, officials, and managers class are smaller in the 20-29 and 30-44 year age groups than even the number of cases and proportions in

the professional class. It is only in the 45 years and over age group that the proportions in this occupational class are as large as the professional proportions. The town-born proportion is 11 per cent, the industrial- and agricultural-born proportions are both 8 per cent. These proportions certainly do not show any relation to type of community of birth and are probably the least affected by educational differences.

Table 26 gives the percentage distributions by type of community of birth for males in the three wage-earners' occupations—unskilled, semiskilled, and skilled—for all age and length of residence groups separately. The question to be answered by these tables was whether in those occupations, where education above a grammar-school level is at a minimum, the type of previous environment as typified by type of community of birth was a factor in the distribution of migrants into these occupations, especially with reference to the skilled occupations. In the skilled occupations a town or industrial environment would seem more likely to produce potential or actual employees in machine shops or electricians, for example, than an agricultural environment. Therefore, in Table 26, where the effect of the greater proportion of the town-born in the clerical occupations upon the proportions in the wage-earners' occupations has been held constant by considering the wage-earners as a separate group, any differences in relation to type of community of birth in the skilled proportions should be revealed.

Table 26 shows clearly that the proportion of the industrial-born in the skilled occupations is always greater than the agricultural-born proportion in every age and length of residence group. The proportions of the industrial-born in the skilled occupations ranges from 54 to 68 per cent, the same proportions for the agricultural-born from 43 to 53 per cent. The differences in the proportions of industrial- and town-born in this occupational class show no consistent direction. In three age and length of residence groups the town- and industrial-born proportions are very similar and greater than the agricultural-born proportions, in one age and length of residence group the town-born proportion is similar to the agricultural-born proportion, and in another to neither the agricultural- nor industrial-born proportion but lies between the two.

The fact remains, however, that for each type of community of

birth, whether wage-earners' occupations are treated as a separate group from the white-collar occupations or not, the greatest pro-

TABLE 26
PERCENTAGE DISTRIBUTIONS OF WAGE-EARNERS' OCCUPATIONS, MALES, BY
TYPE OF COMMUNITY OF BIRTH, AGE GROUPS, AND LENGTH OF
RESIDENCE FOR VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION

OCCUPATION 1930	TYPE OF COMMUNITY OF BIRTH		
	Agriculture	Industry	Towns

I. AGE GROUP 20-29			
A. Less than 4 Years' Residence in Stockholm			
Unskilled	26.15	21.67	22.92
Semiskilled	27.69	22.50	28.47
Skilled	46.15(±4.37)*	55.83(±4.53)*	48.61(±4.17)*
Total	100.00	100.00	100.00
Number of cases	130	120	144
B. 4-10 Years' Residence in Stockholm			
Unskilled	16.06	19.70	17.45
Semiskilled	40.87	26.51	32.31
Skilled	43.07(±4.23)*	53.79(±4.34)*	50.34(±4.09)*
Total	100.00	100.00	100.00
Number of cases	137	132	149

II. AGE GROUP 30-44			
A. 4-10 Years' Residence in Stockholm			
Unskilled	26.61	20.69	18.70
Semiskilled	20.17 S†	10.92	13.01
Skilled	53.22(±3.27)*	68.39(±3.53)*	68.29(±4.20)*
Total	100.00	100.00	100.00
Number of cases	233	174	123

TABLE 26—*Continued*

OCCUPATION 1930	TYPE OF COMMUNITY OF BIRTH		
	Agriculture	Industry	Towns

II. AGE GROUP 30-44—*Continued*

	B. 11-20 Years' Residence in Stockholm		
Unskilled.....	23.76	22.81	17.21
Semiskilled.....	24.75	9.65 S from A†	25.41
Skilled.....	51.49(±3.52)*	67.54(±4.39)*	57.38(±4.48)*
Total.....	100.00	100.00	100.00
Number of cases.....	202	114	122

III. AGE GROUP 45 YEARS AND OVER
(21 Years' or More Residence)

Unskilled.....	31.29	25.37	30.05
Semiskilled.....	17.55	16.92	11.82
Skilled.....	51.16(±2.30)*	57.71(±3.48)*	58.13 (±3.47)*
Total.....	100.00	100.00	100.00
Number of cases.....	473	201	203

* Standard error of percentage.

† See p. 70.

portion of migrants falls within the skilled occupational class. Furthermore, when the wage-earners' occupations are treated as a separate group and comparisons of the proportions of all town-, industrial-, or agricultural-born in this occupational class are made, for the first time in any comparisons the industrial-born proportion is consistently different from the agricultural-born proportion (i.e., greater), and the town-born proportion is generally more similar to the industrial-born proportion than the agricultural-born proportion. So that, while birth in industrial communities does not materially increase the chances of a migrant's obtaining more than a grammar-school education, and this fact in turn to some extent is

reflected in the smaller proportions of industrial-born in the clerical and professional occupations, it does increase the chances of a migrant's falling within the skilled occupational group.

OCCUPATIONAL DISTRIBUTIONS FOR WOMEN

No distinction will be made between wage-earners' and white-collar occupations in the analysis of the type of occupations of women by type of community of birth. When such a distinction was made, the proportions in the wage-earners' occupations did not reveal any differences not present in the complete percentage distribution of all six types of occupations. This is probably due to the fact that no particular group of women's occupations as defined by the occupational classification used here can be set aside as drawing in only women who have had some formal or special training above the grammar-school level. This would not be true of the professional occupations, but the number of women with university training is too small to give any differences of significance—at most 3 per cent of all town-born women. Furthermore, the well-educated woman is not necessarily a competitor for occupations either because of marriage in some cases or because of economic security of another sort.

Tables 27, 28, and 29 give the percentage distribution of types of occupation by type of community of birth for women by age and length of residence groups.

These tables on the types of occupations entered by women according to the type of community of birth should show that for reasons of educational advantages or type of previous environment the town-born woman would be found most frequently in those occupations which are most typical of the urban environment, namely, clerks and kindred workers as well as in the skilled occupations, perhaps. And, therefore, that the agricultural-born woman resident in Stockholm is limited to those occupations requiring the least educational training and previous experience. This type of occupation would seem to be that of domestic service and the semi-skilled occupations. Since so few women have completed any education above a grammar-school level, the occupational distributions for women should reveal to a greater extent than those for men

residents in Stockholm the effect of previous adjustment upon occupational distributions. Women in employment in the older age

TABLE 27

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 20-29, FEMALES, OF TYPE OF OCCUPATION BY TYPE OF COMMUNITY OF BIRTH AND LENGTH OF RESIDENCE FOR VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION

TYPE OF OCCUPATION 1930	TYPE OF COMMUNITY OF BIRTH			
	Agriculture	Mixed	Industry	Towns
A. Less than 4 Years' Residence in Stockholm				
Domestic service.....	65.82(±3.08)*	.....	62.59(±2.90)*	S† 44.84(±3.57)*
Semiskilled.....	16.46	.....	19.78	19.07
Skilled.....	5.49(±1.48)*	.....	5.76(±1.40)*	S† 13.92(±2.48)*
Clerical.....	11.81(±2.10)*	.....	9.71(±1.78)*	S† 19.59(±2.85)*
Proprietors.....	0.00	.....	1.08	0.00
Professions.....	0.42	.....	1.08	2.58
Total.....	100.00	.....	100.00	100.00
Number of cases.....	237	61	278	194
No occupation.....	33	9	52	47
Grand total.....	270	70	330	241
B. 4-10 Years' Residence in Stockholm				
Domestic service.....	45.27(±3.19)*	.....	43.16(±2.93)*	S† 33.06(±2.99)*
Semiskilled.....	28.81	.....	27.72	30.65
Skilled.....	9.05	.....	12.28	10.48
Clerical.....	15.23(±2.30)*	.....	14.39(±2.08)*	S† 25.00(±2.75)*
Proprietors.....	1.23	.....	0.35	0.00
Professions.....	0.41	.....	2.10	0.81
Total.....	100.00	.....	100.00	100.00
Number of cases.....	243	45	285	248
No occupation.....	60	18	87	83
Grand total.....	303	53	372	331

* Standard error of percentage.

† See p. 70.

groups may not, however, reflect the postulated differences in occupational distributions that the younger women residents do in view

TABLE 28

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 30-44, FEMALES, OF TYPE OF OCCUPATION BY TYPE OF COMMUNITY OF BIRTH AND LENGTH OF RESIDENCE FOR VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION

TYPE OF OCCUPATION 1930	TYPE OF COMMUNITY OF BIRTH			
	Agriculture	Mixed	Industry	Towns
A. 4-10 Years' Residence in Stockholm				
Domestic service.....	27.78(±3.37)*	.....	S† 43.07(±4.23)*	27.48(±3.90)*
Semiskilled.....	29.86	.....	24.09	28.24
Skilled.....	18.75(±3.25)*	.....	11.68(±2.74)*	12.21(±2.86)*
Clerical.....	15.28(±3.00)*	.....	19.71(±3.40)*	24.43(±3.56)*
Proprietors.....	5.55	.....	1.45	3.05
Professions.....	2.78	.....	0.00	4.58
Total.....	100.00	.....	100.00	100.00
Number of cases.....	144	39	137	131
No occupation.....	143	44	118	125
Grand total.....	287	83	255	256
B. 11-20 Years' Residence in Stockholm				
Domestic service.....	S† 35.10(±3.31)*	.....	23.31(±3.31)*	20.81(±3.09)*
Semiskilled.....	.....	.....	.....	S from I†
Skilled.....	26.92(±3.08)*	.....	33.74(±3.70)*	19.08(±2.99)*
Clerical.....	15.87(±2.53)*	.....	15.95(±2.87)*	32.37(±3.56)*
Proprietors.....	16.83	.....	20.86	17.92
Professions.....	2.88(±1.16)*	.....	4.91(±1.69)*	7.51(±2.00)*
Total.....	2.40	.....	1.23	2.31
Total.....	100.00	.....	100.00	100.00
Number of cases.....	208	35	163	181
No occupation.....	138	31	140	125
Grand total.....	446	66	303	306

* Standard error of percentage.

† See p. 70.

of the possible effect of marriage and its uneven selection from the different occupational classes.

Table 29 clearly shows that the majority of women enter domestic service during the first years of residence in Stockholm. The agricultural-, industrial-, and town-born proportions in this occupational class are 66, 62½, and 45 per cent, respectively. As length of residence increases, the proportions in domestic service decrease. The

TABLE 29

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 45 YEARS AND OVER, FEMALES, OF TYPE OF OCCUPATION BY TYPE OF COMMUNITY OF BIRTH FOR VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION WITH 21 YEARS' OR MORE RESIDENCE

TYPE OF OCCUPATION 1930	TYPE OF COMMUNITY OF BIRTH			
	Agriculture	Mixed	Industry	Towns
Domestic service.....	39.60(± 2.83)*	.....	34.53(± 4.03)*	33.49(± 3.26)*
Semiskilled.....	22.48	.....	20.86	20.10
Skilled.....	12.42	.....	15.11	12.44
Clerical.....	11.41(± 1.84)*	.....	13.57(± 2.91)*	17.70(± 2.64)*
Proprietors.....	11.74	.....	12.23.....	12.92
Professions.....	2.35	.....	3.60	3.35
Total.....	100.00	.....	100.00	100.00
Number of cases.....	298	.....	139	209
No occupation.....	376	.....	207	232
Grand total.....	674	105	346	441

* Standard error of percentage.

proportions in domestic service for the same age group but length of residence 4-10 years are 45, 43, and 33, respectively.

Table 28 shows the domestic service proportions for each type of community of birth to have further decreased but with a different relationship between the proportions. In the 4-10 years' residence group the proportions of all industrial-born in domestic service is greater than either the agricultural- or the town-born proportions, 43 compared to 28 and 27½ per cent. This type of relationship is the exception. For in the same age group but 11-20 years' residence in Stockholm the agricultural-born proportion in domestic service

is again significantly greater than the town-born proportion, 35 as compared to 21 per cent, and also greater than the industrial-born proportion of 23 per cent.

Table 29, which gives the occupational proportions for the oldest age group and longest length of residence group, discloses the usual relationship between proportions in domestic service for each type of community of birth, that is, the agricultural-born proportion, $39\frac{1}{2}$ per cent, is greater than either the town- or the industrial-born proportions of $33\frac{1}{2}$ and $34\frac{1}{2}$ per cent, respectively, although the differences are much less pronounced than formerly.

The occupational distributions for women also show consistent differences by type of community of birth in the proportions to be found in the clerical occupational class. In each age and length of residence group the town-born proportion is greater than either the agricultural- or the industrial-born proportions. The proportions of the town-, agricultural-, and industrial-born in the clerical class in age group 20-29 are $19\frac{1}{2}$, 12, and 10 per cent, respectively, in the less than 4 years' residence group; 25, 15, and 14 per cent, respectively, in the 4-10 years' residence group. In age group 30-44 years these same proportions are $24\frac{1}{2}$, 15, and 20 per cent in the 4-10 years' residence group; 18, 17, and 21 per cent in the 11-20 years' residence group. This last residence group is the one exception in relationship between type of community of birth and occupation in the clerical class. The oldest age and longest length of residence group gives the proportions in the clerical class for the town-, industrial-, and agricultural-born as 18, 14, and $11\frac{1}{2}$ per cent, respectively.

None of the other occupational proportions shows any consistent differences by type of community of birth. There is some indication, however, that the town-born proportion in the skilled occupations is greater than the industrial- or agricultural-born proportions. This relationship is seen in the 20-29 year age group less than 4 years' residence, and again in the 30-44 year age group 11-20 years' residence, that is, 14 as compared to 6 and $5\frac{1}{2}$ per cent in the former, and 32 as compared to 16 and 16 per cent in the latter age and length of residence groups.

SUMMARY FOR MEN AND WOMEN

The distribution of the occupations of men residents in Stockholm in 1930 born in Västmanland County into six types showed that in the five age and length of residence groups analyzed the most frequent type of occupation was the skilled. For the women residents the most frequent occupational type was that of domestic service. When the occupational distributions for each type of community of birth are compared, it is still the case that the skilled occupational class contains the most men migrants no matter what their type of community of birth. A similar analysis of the occupational distributions for women by type of community of birth shows that domestic service attracts most women migrants except in age group 30-44, so that type of community of birth does not, in general, alter the category of greatest frequency in the occupational distributions for either men or women.

However, a comparison of the occupational distributions, category by category, reveal certain differences in the proportions entering the same occupational class according to the type of community of birth. Men born in industrial communities are found more frequently proportionately in the skilled occupations than the agricultural-born, and, in general, but to a much less marked degree, the town-born are also found in this class more frequently proportionately than the agricultural-born when the wage-earners' occupations are considered separately from the white-collar occupations. The town-born man also has a greater chance of being found in the clerical occupations than either the agricultural- or the industrial-born man. These differences in the proportions in clerical occupation are also found among the women migrants and are to some extent related to the previously discussed differences in educational proportions and to some extent to the nature of the occupational class itself. The sedentary occupations are, perhaps, more typical of the urban environment than of the rural. In the case of the differences found for the skilled occupational proportions, the effect of previous experience or apprenticeship necessary to the skilled occupations are more to be found in an industrial environment than in a farm community. Likewise, the fact that the

agricultural-born woman is found in the domestic service occupational class more frequently proportionately than the town-born reflects the greater lack of specific training among the agricultural-born women inherent in her type of community of birth.

Type of community of birth does not limit the range of occupations which a person born in any one particular type may enter, but it increases the relative number of persons in a certain type of occupational class in the direction to be expected with reference to the degree of industrial development of the community of birth. And, therefore, although the material environment distinguished by the types of community is not so different that there is no overlapping in behavior patterns, in this case occupational patterns, there is some evidence from this analysis that a migrant's type of occupation does show a lag in adaptation to Stockholm as related to type of community of birth.

INCOME DISTRIBUTIONS

The sorting of the cards into from four to five income groups for each type of community of birth for each of the subsamples previously analyzed revealed no differences in the income distributions that were at all consistent. Occasionally, the town-born proportion in the higher income group would be significantly greater than the proportions in this income group for the other two types of community of birth, but this did not occur often enough in the different age and length of residence groups to attach any significance to the fact.

The fact that these income distributions did not reveal any significant differences may be due to the fact that there is a considerable overlapping in the range of incomes for a particular occupational class. The average income for each of the six occupational classes may be different, but the same for each type of community of birth. But, since the distribution of occupations by type of community of birth showed that the same type of occupation had the greatest number of cases, usually about 50 per cent of all cases, the slight increase in the number of cases falling in one of the higher occupa-

tional classes would not necessarily affect the distribution of incomes, dominated as this distribution would be by the distribution of incomes in the largest occupational class. So that, unless the distribution of incomes by type of community of birth in the largest occupational class was significantly differentiated, and the results of the analysis would seem to indicate that this was not the case, there would be little reason to expect significantly different distributions of income in such small samples.

CHAPTER X

COMPARISON OF CIVIL STATUS OF THE VÄSTMANLAND-BORN, STOCKHOLM-BORN, AND NON-STOCKHOLM-BORN 1930 POPULATION OF STOCKHOLM

THE 1930 Swedish census material used in this study gives the following facts concerning civil status in 1930: whether the resident was single, married, widowed, or divorced, and the year of marriage or dissolution of marriage. The *Statistisk årsbok för Stockholms stad. 1934* gives the civil status of the Stockholm population as of December 31, 1930, by five-year age groups (age in 1930) for: (1) the Stockholm-born population, (2) the population born in Stockholm's suburbs, and (3) the population born elsewhere within the kingdom of Sweden.¹ This last population group will be referred to as the non-Stockholm-born population in the discussion of tables to follow.

The civil status material for the Västmanland-born population was tabulated into three groups: single, married, and widowed or divorced. The married group was subdivided into: married before in-migration, married the same year as migrated, and married after residence in Stockholm. This tabulation was made in five-year age groups for males and females in each of the age and length of residence groups used in the previous discussion of education and occupation.

The civil status data for the Stockholm-born population of Stockholm in 1930 make possible for the first time in this study a direct comparison of the Stockholm-born with the Västmanland-born population of Stockholm classified by type of community of birth. Such comparisons should show, since it is assumed that similar material environments are reflected in similar distributions of behavior, that the town-born civil status proportions are similar to those of the Stockholm-born and that the agricultural-born proportions are dissimilar. Therefore, these data should not only show that, as previ-

¹ Table 24.

ously shown for the educational and occupational distributions, the town-born had previous adjustments or adjusted to Stockholm in different distributions of behavior than the industrial- and agricultural-born but that their adjustment is similar to that of a native urban population. As many marriages occur after migration to Stockholm, it will be possible, furthermore, to verify the assumption that residence in Stockholm does not obliterate the differences in behavior as related to type of community of birth even in a type of behavior which takes place in the same environment for migrants born in all types of community.

It seemed likely that the town-born would marry less frequently proportionately than the agricultural- or industrial-born in view of the probably greater need for a family unit in a farm community than in an urban community.

The data on the civil status of the non-Stockholm-born population of Stockholm will make possible a comparison of the Västmanland-born population with the total in-migrant population to see whether the differences in proportions for this sample of the in-migrant population from the Stockholm-born civil status proportions are representative of the entire in-migrant population.

There are two possible types of comparison of the civil status of the Västmanland-born resident of Stockholm with the Stockholm-born residents. The first comparison is a general one; that is, a comparison of the proportions single, married, and widowed or divorced for a particular age group of the Västmanland-born either for the group as a whole or by type of community of birth with the Stockholm-born proportions in this same age group. This type of comparison does not attempt to separate the influence of marriage rates previous to residence in Stockholm from the marriage rates after residence upon the total marriage rate for the Västmanland-born population of Stockholm. As a result, therefore, only gross differences between an in-migrant population and a native city population will be disclosed. The second type of comparison will be of the proportions married of all single at in-migration of the Västmanland-born by type of community of birth. This comparison is made to see whether, when marriages previous to in-migration to Stockholm are excluded from the sample, the proportions marrying after

residence in Stockholm by type of community of birth still show differences from each other and from the Stockholm-born. Thus does residence in Stockholm tend to produce the same marriage rates regardless of type of community of birth or does a classification of migrants by type of community of birth show that, as type of community of birth becomes more similar to Stockholm in degree of industrial development, the marriage rates are similar to those of the Stockholm-born?

In order to make the second comparison, two problems had to be settled. First, whether to include or exclude the married-"same"-year category from the total single at migration. For these migrants may have been married just before migration or just after migration to Stockholm. It seemed better to exclude the married "same" from the total single at in-migration since, by so doing, there would be no possibility of including any before migration marriages, although some after migration marriages might be excluded. In only the 20-29 year age group with less than 4 years' residence in Stockholm did the number of "same" marriages amount to any considerable proportions of the married "after." The second problem concerned with isolating the single at in-migration arose in connection with the widowed or divorced in 1930. Undoubtedly, some of the cases in this classification, especially in the older age groups, had been single at in-migration, but the date of dissolution of marriage was no indication of the date of marriage itself unless dissolution occurred before migration. There were so few cases of widowed or divorced before migration that all cases of the widowed or divorced were excluded from the total single at in-migration.

CIVIL STATUS OF MEN

Table 30 gives the civil status proportions for the Västmanland-born males, age 20-29, resident in Stockholm less than 11 years. The total column in this table is to be compared with both columns in Table 31. A comparison of these three columns shows that the proportion married of the Västmanland-born, 24 per cent, is practically identical with the non-Stockholm-born proportion married, 22 per cent: both these proportions, however, are greater than the Stockholm-born proportion of $17\frac{1}{2}$ per cent. This Stockholm-born

proportion married compares most closely to the town-born proportion married of all single at migration—15 per cent. However, none

TABLE 30

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 20-29, MALES, FOR CIVIL STATUS BY TYPE OF COMMUNITY OF BIRTH OF VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION WITH LESS THAN 11 YEARS' RESIDENCE

CIVIL STATUS 1930	TYPE OF COMMUNITY OF BIRTH				TOTAL
	Agriculture	Mixed	Industry	Towns	
Single.....	74.15(± 2.43)*	.....	74.24(± 2.41)*	78.57(± 1.97)*	76.12
Married.....	25.54	.....	25.45	21.43	23.71
Widowed or divorced.....	0.31	.....	0.30	0.00	0.17
Total.....	100.00	.....	100.00	100.00	100.00
Number of cases.	325	75	330	434	1,164
Percentage married of all single at in-migration	21.50(± 2.34)*	.....	20.20(± 2.30)*	15.17(± 1.79)*	18.19
Number of cases.	307	67	307	402	1,082

* Standard error of percentage.

TABLE 31

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 20-29, MALES, FOR CIVIL STATUS OF STOCKHOLM- AND NON-STOCKHOLM-BORN 1930 STOCKHOLM POPULATION

Civil Status	Non-Stockholm-born	Stockholm-born
Single.....	77.29	81.95
Married.....	22.23	17.68
Widowed or divorced.....	0.48	0.37
Total.....	100.00	100.00
Number of cases.....	23,331	21,589

of the proportions married after residence in Stockholm by type of community of birth differs sufficiently from the Stockholm-born proportion or from each other to be significant statistically, although there is some indication that the town-born marry less frequently

proportionately than the rural-born either in general or after residence in Stockholm.

TABLE 32

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 20-29, MALES, FOR CIVIL STATUS
BY TYPE OF COMMUNITY OF BIRTH AND LENGTH OF RESIDENCE
OF VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION

CIVIL STATUS 1930	TYPE OF COMMUNITY OF BIRTH			
	Agriculture	Mixed	Industry	Towns
A. Less than 4 Years' Residence in Stockholm				
Single.....	83.23	.....	86.14	84.19
Married "after".....	8.07	.....	5.42	4.19
Married "before".....	8.08	.....	7.83	11.62
Total married.....	16.15	.....	13.25	15.81
Widowed or divorced....	0.62	.....	0.60	10.00
Total.....	100.00	.....	100.00	100.00
Number of cases.....	161	44	166	215
Percentage married of all single at in-migration..	8.84(± 2.34)*	.....	5.92(± 1.91)*	4.74(± 1.54)*
Number of cases.....	147	39	152	190
B. 4-10 Years' Residence in Stockholm				
Single.....	65.24	.....	62.20	73.06
Married "after".....	32.32	.....	32.32	23.74
Married "before".....	2.44	.....	5.42	3.20
Total married.....	34.76	.....	37.80	26.94
Widowed or divorced....	0.00	.....	0.00	0.00
Total.....	100.00	.....	100.00	100.00
Number of cases.....	164	31	164	219
Percentage married of all single at in-migration..	33.12(± 3.72)*	.....	34.19(± 3.81)*	24.52(± 2.96)*
Number of cases.....	160	28	155	212

* Standard error of percentage.

Table 32 gives the civil status proportions for the 20-29 year age group when broken down into two lengths of residence groups—less than 4 years' residence and 4-10 years' residence in Stockholm.

The proportions married before or after migration by type of community of birth for the less than 4 years' residence group do not show any statistically reliable differences. The proportions married of all single at in-migration again show that the town-born proportion is inclined to be less than the industrial- or agricultural-born proportion. Again, in the 4-10 years' residence group, the proportion of the town-born married after migration, 24 per cent, is less than the agricultural- or industrial-born proportion of 32 per cent. There is a negligible proportion of any type of migrant married before migration. Consequently, when these migrants have been eliminated from the total proportions married to give the proportion married of all migrants single at time of taking up residence in Stockholm, the same differences in proportions married by type of community of birth appear. So that in this age group and in the longer length of residence group, where the greatest number of marriages have occurred after residence in Stockholm, there is already evidence that the town-born marry less frequently than the agricultural- and industrial-born, and, furthermore, that smaller marriage rates are typical of the town- and Stockholm-born in comparison to the rural-born marriage rates. For the migrants in this age group who were older at immigration (i.e., had resided in Stockholm fewer years) there was some evidence for these conclusions, but the proportions married after migration to Stockholm were based on too few cases to be very reliable statistically.

Table 33 gives the civil status proportions for males 30-44 years of age who have resided in Stockholm from 4 to 21 years. Here again the proportions for the whole Västmanland group are to be compared with the proportions given in Table 34 for the non-Stockholm-born and Stockholm-born in the same age group. The non-Stockholm-born proportion married is $70\frac{1}{2}$ per cent. The Västmanland-born proportion married is $73\frac{1}{2}$ per cent. The Stockholm-born proportion married (68 per cent) is identical to the town-born proportion married and smaller than the agricultural-born proportion married (77 per cent) and the industrial-born proportion ($73\frac{1}{2}$ per cent). However, when the proportions married of all single at in-migration are compared to the Stockholm-born proportion married, the town-born proportion of 62 per cent is less comparable than either the

agricultural-born or industrial-born proportions—71½ and 66 per cent, respectively. So that residence in Stockholm reduces the town-

TABLE 33

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 30-44, MALES, FOR CIVIL STATUS BY TYPE OF COMMUNITY OF BIRTH OF VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION WITH 4-20 YEARS' RESIDENCE

CIVIL STATUS 1930	TYPE OF COMMUNITY OF BIRTH				TOTAL
	Agriculture	Mixed	Industry	Towns	
Single	19.55	.....	23.90	28.57	23.49
Married	77.53 (±1.73)*	.....	73.66 (±2.17)*	68.03 (±2.22)*	73.72 (±1.12)*
Widowed or divorced	2.92	.....	2.44	3.40	2.80
Total	100.00	.....	100.00	100.00	100.00
Number of cases...	583	103	410	441†	1,537
Percentage married of all single at in- migration	71.43 (±2.26)*	.....	66.32 (±2.77)*	61.70 ±(2.68)*	67.06
Number of cases...	399	77	291	329	1,096

* Standard error of percentage.

† One case omitted for lack of marriage date.

TABLE 34

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 30-44, MALES, FOR CIVIL STATUS OF NON-STOCKHOLM- AND STOCKHOLM-BORN 1930 STOCKHOLM POPULATION

Civil Status	Non-Stockholm- born	Stockholm-born
Single	25.83	27.94
Married	70.61	68.38
Widowed or divorced	3.61	3.68
Total	100.00	100.00
Number of cases	39,111	20,640

born proportion married below the Stockholm-born proportion, although the relationship between the proportions married by type of community of birth of all single at in-migration remains the same.

Table 35 reduces Table 33 into its two component length of residence groups. In the 4-10 years' residence group the proportion

TABLE 35

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 30-44, MALES, FOR CIVIL STATUS BY TYPE OF COMMUNITY OF BIRTH AND LENGTH OF RESIDENCE OF VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION

CIVIL STATUS 1930	TYPE OF COMMUNITY OF BIRTH			
	Agriculture	Mixed	Industry	Towns
A. 4-10 Years' Residence in Stockholm				
Single.....	24.14	.....	29.46	29.41
Married "after".....	26.21(± 2.85)*	.....	31.95(± 3.11)*	31.22(± 3.12)*
Married "before".....	47.24	.....	36.51	35.75
Total married.....	73.45	.....	68.46	66.97
Widowed or divorced....	2.41	.....	2.07	3.62
Total.....	100.00	.....	100.00	100.00
Number of cases.....	290	50	241	221
Percentage married of all single at in-migration..	52.05	.....	52.03	51.49
Number of cases.....	146	.....	148	134
B. 11-20 Years' Residence in Stockholm				
Single.....	15.02	.....	15.98	27.73
Married "after".....	71.33(± 2.64)*	.....	68.64(± 3.57)*	60.91(± 3.29)*
Married "before".....	10.24	.....	12.42	8.18
Total married.....	81.57	.....	81.06	69.09
Widowed or divorced....	3.41	.....	2.96	3.18
Total.....	100.00	.....	100.00	100.00
Number of cases.....	293	53	169	220†
Percentage married of all single at in-migration..	82.61(± 2.38)*	.....	81.12(± 3.27)*	68.72(± 3.32)*
Number of cases.....	253	48	143	195

* Standard error of percentage.

† One case not included for lack of information as to date of marriage.

‡ See p. 70.

married of the town-born is somewhat less than the proportions married of the industrial- and agricultural-born, 67 compared to

68½ and 73½ per cent, respectively. However, by excluding the married "before," which are a considerable proportion of the total married—at least 50 per cent—no differences in the proportions married of all single at in-migration by type of community of birth are forthcoming. When the length of residence group 11–20 years is considered, pronounced differences in proportions married between

TABLE 36

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 45 YEARS AND OVER, MALES, FOR CIVIL STATUS BY TYPE OF COMMUNITY OF BIRTH OF VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION WITH 21 YEARS' OR MORE RESIDENCE

CIVIL STATUS 1930	TYPE OF COMMUNITY OF BIRTH				TOTAL
	Agriculture	Mixed	Industry	Towns	
Single.....	11.65	.....	9.67	20.93	13.52
Married "after"....	59.46	.....	59.11	54.46	58.40
Married "before"....	14.22	.....	13.38	14.77	14.41
Total married....	73.68	.....	72.49	69.23	72.81
Widowed or divorced	14.67	.....	17.84	9.84	13.67
Total.....	100.00	.....	100.00	100.00	100.00
Number of cases...	661	91	269	325	1,346
Percentage married of all single at in- migration.....	83.62 (±1.71)*	.....	85.94 (±2.56)*	S† 72.24 ±(2.86)*	81.20
Number of cases...	470	68	185	245	968

* Standard error of percentage.

† See p. 70.

the town-born, on the one hand, and the industrial- and agricultural-born, on the other hand, are found in the direction expected; 69 per cent for the town-born and 81 per cent for the industrial- and agricultural-born. Exclusion of the married "before" does not alter this relationship or the size of the proportions married of all single at in-migration. It seems, therefore, that only when most migrants are unmarried at the time of taking up residence in Stockholm that type of community of birth is a differentiating factor in the proportions marrying of all single at in-migration. For, in the 20–29 age group, 4 to 11 years' residence, where also the proportion married

"before" was small in relation to the proportion married "after," type of place of birth was a differentiating factor in marriage rates; but in the group with less than 4 years' residence, where age at immigration and proportion married "before" were greater, the differences in civil status proportion were not so clearly revealed.

Table 36 presents the civil status proportions for the oldest age and longest length of residence group of the Västmanland-born 1930 Stockholm population; Table 37 presents the same proportions for the non-Stockholm-born and Stockholm-born Stockholm population. If comparisons are made of the proportion ever-married, the

TABLE 37
PERCENTAGE DISTRIBUTIONS IN AGE GROUP 45 YEARS AND OVER,
MALES, FOR CIVIL STATUS OF NON-STOCKHOLM- AND STOCK-
HOLM-BORN 1930 STOCKHOLM POPULATION

Civil Status 1930	Non-Stockholm- born	Stockholm-born
Single.....	15.35	20.55
Married.....	71.31	68.52
Widowed or divorced.....	13.34	10.93
Total.....	100.00	100.00
Number of cases.....	46,684	10,601

effect of death and incompatibility, especially the former, upon the married in 1930 will be excluded and, in this oldest age group, will give a picture of marriage rates comparable to the younger age groups. The proportion ever-married of the Västmanland-born is $86\frac{1}{2}$ per cent, practically the same as the proportion ever-married of the non-Stockholm-born ($84\frac{1}{2}$ per cent) and greater than the Stockholm-born proportion ($79\frac{1}{2}$ per cent). The town-born proportion ever-married is 79 per cent or similar to the Stockholm-born proportion, and less than the industrial- and agricultural-born proportions—90 and 88 per cent, respectively. The town-born proportion married after residence in Stockholm is 72 per cent compared to 86 and 84 per cent for the industrial- and agricultural-born, respectively.

It might be thought that since five five-year age groups were com-

bined and one open-end category to give the civil status proportions for the 45 year and over age group that the age distributions of persons born in Stockholm compared to that of the Västmanland-born from each type of community of birth might distort the civil status proportions. Standardization of the age distribution in the five-year age groups for each type of community of birth on the Stockholm-born age distribution did not show that the proportions married for the Västmanland-born were distorted. There was a slight increase in the proportion married for each type of community of birth.

SUMMARY FOR MEN

The proportions married of the Västmanland-born in the three age groups 20-29 years, 30-44, and 45 years and over with length of residence in Stockholm 0-10, 11-20, and 21 years or more, respectively, were greater than the proportions married in the corresponding age groups for the Stockholm-born. When, however, these Västmanland-born proportions married were broken down by type of community of birth and compared to the Stockholm-born proportion married, the difference between the town-born and the Stockholm-born proportions was always less than three times the standard error of the difference. The industrial- and agricultural-born proportions were always consistently greater than either the town-born or the Stockholm-born proportions, the industrial-born proportion being less different from the latter two proportions than the agricultural-born.

When the two age groups 20-29 and 30-44 years are broken down into two component length of residence groups, it is the longer length of residence group which seems to have brought about the differences in the proportions married after residence in Stockholm for these age groups when not subdivided into their two length of residence groups. Therefore, the greater proportions married for the agricultural- or industrial-born than for the town-born in these age groups as a whole is not the result of the marriage rates both before and after migration working in the same direction with equal force, but is due to the fact that most migrants marry after migration to Stockholm, since they were below the marrying age at time of in-migration. However, in spite of minor variations in the proportion marry-

ing before and after migration for the different length of residence groups into which these age groups were divided, the net result was to produce in each of the three age groups a proportion married for the town-born similar to that of the Stockholm-born, which proportions were smaller than the agricultural- or industrial-born proportions. In each of the longer length of residence groups there was also evidence that the rate of marriage of the town-born single at immigration was less than for the rural-born, although the town-born rate was not necessarily the same as for the Stockholm-born.

The comparison of the proportions married for all the Västmanland-born in each age group with the total non-Stockholm-born proportions showed that the sample migrant population analyzed here compared very closely to the total migrant population. And, therefore, the results of this analysis are not necessarily confined to this sample population alone.

CIVIL STATUS OF WOMEN

There is no reason a priori for assuming that the civil status proportions for women will show the same differentiation by type of community of birth as the civil status proportions for men. The only assumption is that the town-born women will have a marriage rate more similar to the Stockholm-born women than either the agricultural- or the industrial-born. Always provided, of course, the influence of type of community of birth upon marriage rates is not entirely counteracted by some uncontrolled variables not present in both the non-Stockholm-born and the Stockholm-born situations, as, for instance, the selection of single women migrants from outside Stockholm with less opportunity for marriage either because of economic, social, or personal reasons than the Stockholm-born woman.

Table 38 gives the civil status proportions for the Västmanland-born women age 20-29 with less than 11 years' residence in Stockholm. Comparison of the proportions married of the Västmanland-born in this age group with the non-Stockholm-born and Stockholm-born proportions (Table 39) shows that all three proportions are 25 per cent. The town-born and industrial-born proportions married, $27\frac{1}{2}$ and 25 per cent, respectively, are more similar to the Stock-

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holm-born proportion married than the agricultural-born proportion of 21 per cent. When only the proportions married of all single at in-migration are considered, there is still evident a slight tendency

TABLE 38

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 20-29, FEMALES, FOR CIVIL STATUS BY TYPE OF COMMUNITY OF BIRTH OF VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION WITH LESS THAN 11 YEARS' RESIDENCE

CIVIL STATUS 1930	TYPE OF COMMUNITY OF BIRTH				TOTAL
	Agriculture	Mixed	Industry	Towns	
Single.....	78.71	.....	74.07	71.85	74.45
Married.....	20.77	.....	25.36	27.62	24.70
Widowed or divorced.....	0.52	.....	0.57	0.52	0.55
Total.....	100.00	.....	100.00	100.00	100.00
Number of cases.....	573	133	702	572	1,980
Percentage married of all single at in-migration..	14.26	.....	16.13	17.30	15.96
Number of cases.....	526	118	620	497	1,761

TABLE 39

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 20-29, FEMALES, FOR CIVIL STATUS OF NON-STOCKHOLM- AND STOCKHOLM-BORN 1930 STOCKHOLM POPULATION

Civil Status 1930	Non-Stockholm-born	Stockholm-born
Single.....	74.16	73.79
Married.....	25.15	25.27
Widowed or divorced.....	0.69	0.94
Total.....	100.00	100.00
Number of cases.....	38,690	21,832

for the town- and industrial-born to marry more frequently relatively than the agricultural-born. Therefore, in this age group for women there is no difference in proportions married of the Stockholm- and non-Stockholm-born as was the case with the men's proportions, and also the town-born proportion is larger than the agricultural-

born proportion and not the reverse as in the case of the town-born men.

TABLE 40

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 20-29, FEMALES, FOR CIVIL STATUS BY TYPE OF COMMUNITY OF BIRTH AND LENGTH OF RESIDENCE OF VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION

CIVIL STATUS 1930	TYPE OF COMMUNITY OF BIRTH			
	Agriculture	Mixed	Industry	Towns
A. Less than 4 Years' Residence in Stockholm				
Single.	84.81	.....	81.82	78.01
Married "after".....	3.70	.....	1.52	2.07
Married "before".....	10.74	.....	16.05	19.58
Total married.....	14.24	.....	17.57	21.65
Widowed or divorced....	0.74	.....	0.61	0.41
Total.....	100.00	.....	100.00	100.00
Number of cases.....	270	70	330	241
Percentage married of all single at in-migration..	4.18	.....	1.82	2.59
Number of cases.....	239	58	275	193
B. 4-10 Years' Residence in Stockholm				
Single.....	73.24	.....	67.20	67.27
Married "after".....	21.45	.....	25.54	24.47
Married "before".....	4.95	.....	6.72	7.55
Total married.....	26.40(±2.53)*	.....	32.26(±2.42)*	32.02(±2.56)*
Widowed or divorced....	0.33	.....	0.54	0.60
Total.....	100.00	.....	100.00	100.00
Number of cases.....	303	63	372	331
Percentage married of all single at in-migration..	22.65(±2.47)*	.....	27.54(±2.40)*	26.64(±2.53)*
Number of cases.....	287	60	345	304

* Standard error of percentage.

When this age group is subdivided by two length of residence groups, the proportions married in the less than 4 years' residence groups, as given in Table 40, again show the town-born women

marry relatively more frequently than the agricultural-born women. These marriages proportions are almost entirely made up of before-migration marriages and do not, therefore, reflect to any appreciable extent the effect of residence in Stockholm. The proportions marrying of all single at in-migration are based on too few cases to be of any significance. In the 4 to 11 years' residence group, as was found for men, the majority of migrants marry after migration— $24\frac{1}{2}$ per cent of the town-born, $25\frac{1}{2}$ per cent of the industrial-born, and $21\frac{1}{2}$ per cent of the agricultural-born, as compared to 5-7 per cent mar-

TABLE 41

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 30-44, FEMALES, FOR CIVIL STATUS
BY TYPE OF COMMUNITY OF BIRTH OF VÄSTMANLAND-BORN 1930
STOCKHOLM POPULATION WITH 4-20 YEARS' RESIDENCE

CIVIL STATUS 1930	TYPE OF COMMUNITY OF BIRTH				TOTAL
	Agriculture	Mixed	Industry	Towns	
Single.....	38.39	.....	35.79	36.52	36.66
Married.....	58.29	.....	59.35	58.87	59.17
Widowed or divorced....	3.32	.....	4.86	4.61	4.17
Total.....	100.00	.....	100.00	100.00	100.00
Number of cases.....	633	140	556	564	1,893
Percentage married of all single at in-migration..	44.92	.....	49.49	46.77	46.93
Number of cases.....	433	93	394	387	1,307

rying before migration. But even after residence in Stockholm the proportions marrying of all single at in-migration show the town- and industrial-born proportion of $26\frac{1}{2}$ and $27\frac{1}{2}$ per cent, respectively, still to be greater than the agricultural-born proportion of $22\frac{1}{2}$ per cent.

The Västmanland-born proportion married in age group 30-34, as given in Table 41, is 59 per cent, the non-Stockholm- and Stockholm-born, 57 per cent (see Table 42). Here again the proportion married of women born in Stockholm or outside of Stockholm are alike. Even when the Västmanland-born population is broken down by type of community of birth the proportions married still remain about 58 per cent.

Table 43 shows that this lack of differentiation in proportions in the 30-44 age group as a whole is the result of two contradictory tendencies in the proportions married for the 4-10 and 11-20 years' residence groups. In the shortest length of residence group the total proportions married as well as the proportion married of all single at in-migration show that the industrial-born proportion is less than either the town- or the agricultural-born proportions. In the longest length of residence the total proportion married or the proportion married of all single at in-migration of the industrial-born is greater than the town- and agricultural-born proportions. And since the

TABLE 42

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 30-44, FEMALES, FOR
CIVIL STATUS OF NON-STOCKHOLM- AND STOCKHOLM-
BORN 1930 STOCKHOLM POPULATION

Civil Status 1930	Non-Stockholm-born	Stockholm-born
Single.....	57.17	36.76
Married.....	57.31	56.88
Widowed or divorced.....	5.51	6.36
Total.....	100.00	100.00
Number of cases.....	51,808	20,507

total proportion married in both length of residence groups is about the same, 58 per cent, this difference in proportions married by type of community of birth was obscured in the age group as a whole. It is in the longest length of residence group that the greatest number of marriages occur after residence in Stockholm. So that, if there has been a real shift in the proportions marrying after residence in Stockholm in the earlier years of in-migration compared to the later years (i.e., for migrants to Stockholm before as compared to after 1920), the longest length of residence and oldest age group may again show that the industrial-born marry more frequently than either the town- or the agricultural-born.

Table 44 gives the civil status proportions for the longest length of residence and oldest age group. If the proportion ever-married of the Stockholm-born is compared to the same proportion for the

town-born, the percentages are 65 and 66, respectively. These two proportions are less than the proportions ever-married for the in-

TABLE 43

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 30-44, FEMALES, FOR CIVIL STATUS BY TYPE OF COMMUNITY OF BIRTH AND LENGTH OF RESIDENCE OF VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION

CIVIL STATUS 1930	TYPE OF COMMUNITY OF BIRTH			
	Agriculture	Mixed	Industry	Towns
A. 4-10 Years' Residence in Stockholm				
Single.....	34.84	.....	41.11	36.04
Married "after".....	15.68	.....	13.43	15.89
Married "before".....	45.64	.....	39.53	44.19
Total married.....	61.32	.....	52.96	60.08
Widowed or divorced....	3.83	.....	5.93	3.88
Total.....	100.00	.....	100.00	100.00
Number of cases.....	287	73	253	258
Percentage married of all single at in-migration..	31.04(±3.96)*	.....	24.64(±3.67)*	30.69(±3.98)*
Number of cases.....	145	43	138	134
B. 11-20 Years' Residence in Stockholm				
Single.....	41.33	.....	31.35	36.93
Married "after".....	41.91	.....	53.14	45.75
Married "before".....	13.87	.....	11.55	12.09
Total married.....	55.78	.....	64.69	57.84
Widowed or divorced....	2.89	.....	3.96	5.23
Total.....	100.00	.....	100.00	100.00
Number of cases.....	346	66	303	306
Percentage married of all single at in-migration..	50.35(±2.95)*	.....	S† 62.89(±3.03)*	55.34(±3.13)*
Number of cases.....	288	50	256	253

* Standard error of percentage.

† See p. 70.

dustrial-born, 77 per cent, and for the agricultural-born, 70 per cent. This is the same type of relationship as found for men in all the age

groups. However, this is the first time the town- and Stockholm-born proportions married have been less than the rural-born proportions in the analysis of civil status for women.

Comparing the proportions married of all single at in-migration for this age group, the town-born are still not significantly differentiated from the agricultural- and industrial-born. Again, as in the

TABLE 44

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 45 YEARS AND OVER, FEMALES, FOR CIVIL STATUS BY TYPE OF COMMUNITY OF BIRTH OF VÄSTMANLAND-BORN 1930 STOCKHOLM POPULATION WITH 21 YEARS' OR MORE RESIDENCE

CIVIL STATUS 1930	TYPE OF COMMUNITY OF BIRTH				TOTAL
	Agriculture	Mixed	Industry	Towns	
Single.....	30.07	.....	23.99	32.80	29.97
Married "after"....	28.44	.....	43.35	32.69	31.05
Married "before"....	14.08	.....	11.56	4.21	12.59
Total married....	42.52	.....	55.91	36.90	43.64
Widowed or divorced	27.41	.....	21.10	30.30	26.39
Total.....	100.00	.....	100.00	100.00	100.00
Number of cases...	675*	105	346	439	1,565
Percentage married of all single at in- migration.....	48.60 (± 2.51)†	.....	S† 64.38 (± 3.14)†	43.97 (± 3.10)†	50.89
Number of cases...	395	70	233	257	955

* One case omitted for lack of marriage date.

† Standard error of percentage.

‡ See p. 70.

longest length of residence group for age group 30-44, the industrial-born proportion is greater and significantly so than either the agricultural- or the town-born proportions married of all single at in-migration.

Standardization of the age distribution of each type of community of birth upon the Stockholm-born age distribution did not account for the relative increase in the industrial-born proportion married after residence in Stockholm in the oldest age and length of residence groups.

SUMMARY FOR WOMEN

The prediction that the town-born proportion married would be similar to that of the Stockholm-born was found to be the case in two of the three age groups analyzed, namely, the 20-29 and 45 years and over age groups. In the former age group the town- and industrial-born proportions married are both similar to the Stockholm-born proportion married and greater than the agricultural-born proportion married, while in the oldest age group the town-born proportion is considerably less than the industrial-born proportion ever-married and somewhat less than the agricultural-born proportion.

TABLE 45

PERCENTAGE DISTRIBUTIONS IN AGE GROUP 45 YEARS AND OVER
FEMALES, FOR CIVIL STATUS OF NON-STOCKHOLM- AND
STOCKHOLM-BORN 1930 STOCKHOLM POPULATION

Civil Status 1930	Non-Stockholm-born	Stockholm-born
Single.....	28.70	35.23
Married.....	43.23	39.26
Widowed or divorced.....	28.07	25.51
Total.....	100.00	100.00
Number of cases.....	63,330	13,423

As soon as the proportions married of all single at in-migration are compared for the different age groups, the town-born proportion shows no significant difference from the rural-born proportions except in the 45 years and over age group, where, instead of being significantly different from the agricultural-born proportion, it is significantly less than the industrial-born proportion.

When the 20-29 and 30-44 year age groups are broken down into their two component length of residence groups and the proportions married of all single at in-migration are compared in the longest length of residence group, where the greatest proportion of all marriages occur after residence in Stockholm, the results are still contradictory. That is, in the longest length of residence group for the 20-29 age group the town- and industrial-born proportions are both greater than the agricultural-born proportions. This type of result,

although not anticipated in view of the relationships found for men, would have been in accordance with the hypothesis of similar material environments resulting in similar distributions of behavior. But in the longest length of residence group in age group 30-44 years the town-born do not have a proportion married of all single at in-migration more similar to that of the industrial-born but most dissimilar to it and most similar to the agricultural-born proportion, as was found in the oldest age group as well.

Although there is some evidence that the town- and Stockholm-born proportions married are similar and unlike the agricultural-born proportions, this evidence does not recur consistently or in the same direction when the analysis includes the marriage rates of the single at in-migration, as was the case in the analysis of the civil status proportions of men. Therefore, this gross type of analysis of civil status proportions for women in-migrants to Stockholm shows either that the predicted differences do not hold for women or that they are obscured by some uncontrolled factors.

SUMMARY FOR MEN AND WOMEN

The proportion of all Stockholm-born men married was found to be less than the proportion of all non-Stockholm-born men married in the population of Stockholm in 1930. When a sample of the total in-migrant population was classified by type of community of birth and age, it was found that the proportion of town-born men married was considerably less than the proportions married for the agricultural- or industrial-born men. Furthermore, the town-born proportion married was about the same as the Stockholm-born proportion married. This relationship between marriage rate and type of community of birth in the different age groups analyzed continued to be verified when only marriages of all in-migrants single at the time of taking up residence in Stockholm were considered, provided, however, in a given length of residence group most persons were not already married when taking up residence in Stockholm, so that a smaller rate of marriage is typical for the male resident in Stockholm whether born in the city of Stockholm itself or in a town outside.

These results are significant for this study, since they show that

similar types of communities do seem to produce similar behavior, in this field of behavior at least, and that dissimilar types of communities of birth seem to produce differences which continue to be manifested even in a new environment.

The proportion of women married in the non-Stockholm-born and Stockholm-born population of Stockholm in 1930 showed that in only one age group were the two proportions at all different and in the same direction as the proportions for men. Further analysis of the proportions married by type of community of birth did not show that the town- and the Stockholm-born women had the same proportion married for each age group, or that they had a consistently greater or smaller proportion married than the agricultural- and industrial-born women. In the youngest age group the town-born women did have a greater, not smaller, proportion married, but this relationship was not found to hold in the older age groups, where, after residence in Stockholm of all single at in-migration, the industrial-born women had a consistently greater proportion married than either the town- or the agricultural-born women. These results for women do not throw any light on the hypothesis underlying this study.

CHAPTER XI

SUMMARY

THIS chapter will be devoted to a summary of the statistical results obtained by relating the type of community of birth of the population of Stockholm in 1930 born in Västmanland County with the amount of education completed, the type of occupation engaged in, the income received, and the civil status in 1930.

THE HYPOTHESIS

The second part of this study was an attempt to show that the behavior patterns of migrants resident in a city reflected the behavior patterns of the types of communities in which they were born by revealing a lag in adaptation to Stockholm for persons born in communities which differ from it in degree of industrial development. Part II is, then, closely related to Part I. For, if it could be shown that the behavior patterns of the Stockholm- and town-born residents resembled each other and the patterns of residents born in agricultural communities were consistently different from the former, these results would tend to confirm the hypothesis that type of community of birth is a factor in the process of migration.

PROCEDURE

Three factors were held constant in the analysis of the distributions of income received, the amount of education completed, type of occupation, and civil status in 1930. These factors were age in 1930, length of residence in Stockholm, and sex. Four age groups and four length of residence groups were used. Five out of the resulting sixteen age and length of residence groups for each sex were analyzed. The number of cases in the remaining age and length of residence groups were not great enough to warrant statistical analysis.

RESULTS OF THE COMPARISON OF THE DISTRIBUTIONS OF
AMOUNT OF EDUCATION COMPLETED BY TYPE OF
COMMUNITY OF BIRTH

A comparison of the distributions of amount of education completed by these Stockholm residents by type of community of birth should confirm the assumption that different types of community do have different distributions of behavior rather than show the lag in adaptation to a city due to the persistence after migration of past behavior patterns. For, by and large, the migrant has completed his education before migration to Stockholm, considering the average age at in-migration to be between twenty and twenty-five years. Therefore, wherever education is a factor in facilitating adaptation to Stockholm, the town-born have the greatest advantage and the agricultural-born the greatest handicap, if levels of education are assumed to increase as one passes from agricultural communities to a city in type of community of birth.

The distributions of amount of education completed in 1930 by type of community of birth showed in every age and length of residence group, for men as well as for women, that the proportion of the town-born residents in Stockholm who had completed more than grammar school was greater than the corresponding proportion for the agricultural-born. The proportion of the industrial-born residents in Stockholm who had completed this same amount of education was, in general, similar to the agricultural-born proportion, although in a few age and length of residence groups for men this proportion did take the intermediate position to be expected by the intermediate type of material environment of this community between that of a town and an agricultural community.

In each age group the proportion of the town-born who had completed more than grammar school was more similar to the same proportion for the total Stockholm population in 1930 than the agricultural- and industrial-born proportions. This indicated that, when the proportion of the population of Stockholm in 1930 born in other towns or Stockholm was taken into account, the town-born educational proportions were probably more similar to the Stockholm-born proportions than the proportions for either of the other two types of community. So that the town-born residents in Stockholm

did have the asset which more formal education brings more frequently proportionately than the agricultural-born residents. The town-born acquired this asset, presumably, in their community of birth rather than by residence in Stockholm. The level of education of the community of birth as reflected in these educational proportions is, therefore, a delimiting factor on those fields of activity where education is an asset in a city.

RESULTS OF THE COMPARISON OF THE DISTRIBUTIONS
OF TYPES OF OCCUPATIONS BY TYPE OF
COMMUNITY OF BIRTH

This comparison of types of occupations of Stockholm residents in 1930 should reflect the effect of the previously found differences in amount of education completed as well as the persistence of past behavior patterns even after migration to a city.

The first comparison between the distributions of occupations into six classes was between the proportions in the white-collar occupations, that is, those three occupational classes where education would be the greatest asset. The only class of white-collar occupations for both men and women which contained enough cases to give any reliability to the differences in proportions was the class for clerks and kindred workers. The proportion of the town-born, men as well as women, in this class was consistently greater than the proportion of the agricultural- or industrial-born. Since this occupational class did not by any means exclude all persons with no formal education, both the effect of the previous differences in education completed as related to type of community of birth as well as the effect of previous behavior patterns are reflected in these proportions.

When the wage-earners' occupations for men were considered separately from the white-collar occupations to reduce to some extent the effect of amount of education completed upon these proportions, it was the skilled occupational class which showed a consistent trend in differences by type of community of birth. The industrial-born proportion in the skilled occupations was consistently greater than the agricultural-born proportion. The proportions for the town-born in this class were, on the whole, more similar to the industrial-born

proportion than to the agricultural-born proportion. Thus, past experience is a barrier in adaptation to Stockholm for the industrial-born in so far as education is a factor in type of occupation, but is an asset in the type of occupation where past habits similar to those of the town-born may be utilized.

Among women residents in Stockholm the proportion of town-born women in domestic service was consistently less than the agricultural-born proportion and, with one exception, for the industrial-born. There was also some indication that the town-born women were to be found more frequently proportionately in the skilled occupations than either the agricultural- or the industrial-born.

No comparison of these occupational proportions with those for the Stockholm-born could be readily made. However, the results indicate that the degree of industrial development of community of birth was reflected in the differences found in the proportions in the clerical and skilled occupations for men and in the proportions in domestic service, clerical, and skilled occupations for women.

COMPARISON OF CIVIL STATUS BY TYPE OF COMMUNITY OF BIRTH

The civil status proportions for each type of community of birth could be compared for the first time directly with the same proportions for the Stockholm-born population of Stockholm in 1930.

In any age group for males the proportion of the town-born married was similar to the Stockholm-born proportion married. The town-born proportion married was in every age group less than the proportions married for the agricultural- or industrial-born.

When only the married after residence in Stockholm of all single at in-migration were considered, the town-born proportion in any age group for men was still smaller than the proportion married of the agricultural- and industrial-born.

These results for men show not only the resemblance in behavior patterns between the town-born and the Stockholm-born residents of Stockholm but also the persistence of assumed differences in these habits after residence in Stockholm for the agricultural- and industrial-born.

The civil status proportions for women residents of Stockholm did not give any clear-cut results.

CONCLUSIONS

The result of this analysis showed that the differences in the distributions of amount of education and types of occupations for men and women, as well as for civil status of men by type of community of birth, did seem to reflect the behavior patterns of different types of communities and the lag in adaptation to Stockholm of migrants born in communities differing from it in type of industrial development. The results of the analysis of the distribution of income by type of community of birth did not, however, reveal any significant or consistent differences.

CHAPTER XII

CONCLUSIONS

IN THIS chapter the conclusions to be drawn from the statistical results summarized in chapters vi and xi will be stated in general terms. The hypothesis will be briefly restated, and the type of statistical material and the classification of communities described. The results of the study will, then, be discussed with reference to a theory of migration, sociological theory, and practical problems.

THE HYPOTHESIS

The hypothesis underlying this study of internal migration is that people tend to migrate between communities resembling one another in degree of industrial development. On the average, people presumably spend the formative years of their lives in their community of birth. The adaptation of a migrant is thus assumed to be related to the type of material environment of his community of birth. The type of community of birth of a migrant is, then, that type of community to which he will most frequently tend to move. Actually, however, a person may move to all types of community, owing to the multiplicity of factors which undoubtedly enter into the migration process. It is postulated that, although the various pushes and pulls, economic or otherwise, may operate to draw a person from his community of birth, these forces will work through the medium of not widely differing types of material environment.¹ There are undoubtedly exceptions. These exceptions would seem to be in the field of immigration to the United States. But this specific point has yet to be tested. Thus the farmer will not always move to another farm community but may move to a town and then to a large city rather than directly to the city from his farm community of birth. The person born in a town, however, will move more often

¹ The factor of similarity of communities is hard to measure. In this study it has been assumed that the degree of industrial development of towns was more similar to that of a large city than to that of an agricultural community.

to a large city than the farm-born person. Therefore, moves from the farm to the city are assumed to be less frequent than moves to the city from towns in relation to all moves from the two types of community.

It was further postulated that a comparison by types of community of birth of the status of persons who have migrated to a large city measured by their education, occupations, income, and civil status should show that adaptation to a city is on the basis of resembling material environments. For, if the type of adaptation was a factor in directing the process of migration, the differences in adaptation to a city among these inhabitants of the city should reflect the behavior patterns of the community of birth, or the lag in adaptation as so related.

STATISTICAL MATERIAL

The material for this study of internal migration was obtained by abstracting from the primary data sheets for the 1930 decennial census of Sweden all persons who were residents in Stockholm in 1930 and who were born in the county of Västmanland. The census gave data as to birthplace and place of residence previous to residence in Stockholm. There was also information as to the amount of education completed in 1930, the type of occupation, the income received, and the civil status in 1930 for these residents of Stockholm. It is apparent from this description of the type of material used in this study that no direct verification of the hypothesis was obtained. Such a direct verification would mean a study of the destination of migration of persons identified at their community of birth. In the present study the destination of migration is the same for all migrants. Thus a retrospective view of the process of migration results from this material. The hypothesis was tested, therefore, with respect to the process of migration to Stockholm of persons who have migrated and were living there in 1930 for varying length of time periods.

The community of birth and the last place of residence previous to residence in Stockholm were classified by an index of the relative taxation value of agricultural and "other" property. This classification of communities resulted in three types of community in-

creasing in the relative taxation value of "other" property in the following order: agricultural, rural "mixed," and rural industrial. Towns, as given in the Swedish census, were the fourth type of community used. Towns were thus assumed to be most similar to Stockholm in degree of industrial development, agricultural communities least.

CONCLUSIONS TO PART I

The first part of this study dealt with the type of community from which a migrant had moved to Stockholm compared to the type of community of birth.

The conclusions to be drawn from this sample of persons who had migrated to a city are that persons born in rural areas are to be found in a large city less often than is to be expected, and persons born in towns more often, when the proportion born in these two types of community and living in Stockholm in 1930 are compared to the proportions born in these two types of community and living in Sweden in 1930. Thus the residents of Stockholm were born in towns, or a resembling type of community more often than in rural districts or a less closely resembling material environment when compared to the chances of birth in the two types of community and residence in Sweden in 1930.

As to the process of migration itself, the conclusions are that all residents of a city who have migrated there last resided in a town more often than in any other type of community. Further analysis of the data showed that 35 per cent of all these residents moved directly to Stockholm from their community of birth. The conclusions are, nevertheless, that the town-born person moves more often from town of birth to Stockholm than the person born on a farm moves to Stockholm from his community of birth. And, conversely, that a person born in a farm community moves more often indirectly to Stockholm from a town than directly or indirectly from a farm community. A comparison of the proportions of direct and indirect moves by type of community of birth for three subperiods of immigration showed that the same conclusions held for each subperiod. These conclusions continued to be borne out when the factors of the population of communities and their distance from Stockholm were held constant.

Thus the moves of residents of a city who had migrated there and were born in a county quite accessible to it with respect to distance and transportation facilities, and over whom Stockholm must have exerted considerable economic attraction, show the effect of resembling material environments upon this process of migration by the greater frequency of moves from towns than from agricultural communities either directly or indirectly from birthplace.

CONCLUSIONS TO PART II

It was also shown in the second part of this study that the status of persons residing in a city who had migrated there differed according to the type of community in which they were born, as measured by their education, occupation, and the civil status of men.

In the case of the civil status of men it was shown that men born in towns in Västmanland County and residing in Stockholm had a percentage married similar to the residents born in this city and residing there in 1930. For the percentage of men married in 1930 in the particular age and length of residence groups analyzed was less for the town- and Stockholm-born than for the agricultural-born and, to a lesser degree, than the percentage married of the industrial-born. These differences were most pronounced when the persons residing in Stockholm had been for the most part unmarried at the time of taking up residence in this city. So that, although the type of community of birth analysis brought forth these differences in the proportions married for men, the behavior studied, marriage, took place for most migrants in the same environment—Stockholm. This would seem to indicate a carry-over of old patterns into the new urban environment for the agricultural- and industrial-born, and verify the assumption that the town-born person has the same type of behavior patterns as the city-born, since the percentage married for the town- and Stockholm-born was so very similar.

The results of the analysis of amount of education completed in 1930 by type of community of birth were much as to be expected, namely, that the persons born in towns had completed more education than those born in agricultural or industrial communities. Since for the most part education is completed before residence in Stockholm, these results show that there are differences in behavior pat-

terns associated with birth in communities differing in degree of industrial development, and, furthermore, that these differences are not counteracted by residence in a city or other towns.

These differences in amount of education completed are reflected, to some extent, in the occupational distributions by type of community of birth. Owing to the small size of the individual samples analyzed when age and length of residence in Stockholm had been held constant, it was impossible to separate the effect of previous environment from the effect of education upon the differences found in the occupational proportions by type of community of birth. The results of the analysis of occupations showed that the town-born man as well as woman was found more frequently proportionately in the clerical occupations than the agricultural-born person. Both the town- and industrial-born men and women were found more frequently proportionately in the skilled occupations. The women born in an agricultural community were always found in greater proportions in the domestic service class than the women born either in towns or in industrial communities. The differences in proportions for the clerical occupations are presumably the result as much of differences in level of education as of previous experience. The differences in proportions for the skilled occupations are probably almost entirely due to the factors of previous training and environment rather than to the educational factor. The comparison of the occupational distributions by type of community of birth could not be compared with a similar distribution for the population of Stockholm in 1930 born in Stockholm. So that from this study it is not possible to conclude that the town-born occupational distribution is similar to that of the Stockholm-born residents of Stockholm. The determination of this fact is a matter for further study.

Adaptation to a city, as indicated by these results, may well be on the basis of resembling material environments and ties up, therefore, with the hypothesis that migration tends to be between communities closely resembling each other in degree of industrial development.

DISCUSSION OF RESULTS WITH RESPECT TO A THEORY OF MIGRATION

Migration theory may be thought of as consisting of three main concepts: that of the push away from a locality, of the pull

toward a locality, and the means of migration between any two localities.

The push from a locality may be due to famine, poverty, religious intolerance, crop failures, eroded soils, etc.; the pull toward a locality to rapid industrial developments and the resulting increased demands for labor, to higher wages, the desire for a higher standard of living, religious tolerance, or other appeals. Since the nineteenth century the concept of push has been applied to the rural districts of a country, that of pull to the cities or areas of highest industrial development. The net movements of population have verified this conception by showing net losses of population by the rural districts and net gains of population by the cities and towns of a country. The relationship of the net redistribution of population to economic factors has also been confirmed by the falling-off of migration during the downswings in the business cycle, and the increase in migration during the upswings. However, with the more detailed material on internal migration available in Sweden, it has been found that these net gains and losses by towns and rural areas of a country are small in comparison to the total amount of migration of which this net movement is a result. And, furthermore, that there is extensive movement of population even in times of depression. This would seem to indicate that, when total streams of migration are considered, the economic factor alone is not sufficient to explain regularities in the migration process.

Since the farmer tends to migrate to the city indirectly through the small town, it would seem that, in spite of the presumably greater economic differential between the farm and the city than between the town and the city, the pull cityward works through the medium of resembling material environments. If this factor of economic differentials between community types could have been held constant, the relationships found would probably have been greater.

This thesis contributes to the further analysis of these two concepts in migration theory by suggesting that a great part of the total streams of migration could be accounted for not in terms of push or pull but in terms of migration between closely resembling types of communities.

The theory of resembling groups in the migration process is also a contribution to the concept of means in migration theory. It is

clear that the horse, the sailboat, the steamboat, and the train have all affected the process of migration. It is also true that money may be considered a means of migration in the sense of its increased prevalence as a medium of exchange or in the fluctuations in its availability as related to the business cycle. However, knowledge and ignorance or habit patterns are as truly a means of migration as a railroad ticket or the railroad itself. For, if one is accustomed to the habits and patterns of life of a big city, this is as truly helpful to transportation to a city as a railroad ticket. The more experienced in the ways of life of a city a person may be, the easier the transition and, presumably, the more inclined the person is to make the transition. Thus it was probably easier for Daniel Boone to move from Virginia to Kentucky than it is for a person in Brooklyn today to move to the Alaskan wilds, owing to the differences in experience or culture patterns.

DISCUSSION OF RESULTS IN THE LIGHT OF SOCIOLOGICAL THEORY

If sociology is considered a study of groups and group processes, then population movements are a part of such a theory of sociology. Thus the foregoing discussion of migration theory also falls within the theory of sociology as a study of groups and group patterns.

Groups have often been discovered to display differences in behavior as measured by marriage, divorce, and delinquency rates, education completed, etc., when the groups were defined in relation to the differences in physical aspects of various regions of a city. Differences appear, also, by a study of groups from areas defined as rural as compared to urban. The migrant group may also be related to the areas of origin of migration and of destination and be compared as to differences or similarities in the group patterns and the possible significance of these differences in the process of selection for migration.

In this manner the material environment has often been used to define groups and has been found to be related to significant differences in behavior patterns. This study has pushed the relationship of material environment to behavior patterns a step farther. This relationship has been assumed to exist. Then the behavior patterns

have been shown to direct future behavior, such as migration, in such a way that the least change in behavior patterns is necessary. Further, when the environment has been shown to have been changed, a lag or persistence in past behavior patterns has been shown.

DISCUSSION OF RESULTS WITH RESPECT TO PRACTICAL PROBLEMS

Finally, the results of this study may be discussed from the point of view of the practical problems connected with the collection of further data on migrations and with the redirection of population from certain areas of a country.

There has been pressure brought to bear for some time on the United States census to include questions concerning mobility in the next decennial census. The results of the studies of migration in Sweden, of which this study is only a part, should help formulate the aims in the collection of new data and indicate the extensiveness of the information required to give more clear-cut answers to the problems of distance, direction, and numbers involved in the migration process.

The application of the particular results of this study to any practical problems arising from the desire to evacuate population from poor lands or from areas with low standards of living would be to point out that the economic lure alone must not be considered but the previous type of material environment of the group must be taken into account. Therefore, a program for the direction of migration should see that the new areas chosen for population movement represent a material environment not only of economic promise but similar to the old areas of residence, so that old habits, knowledge, or ignorance will not hinder the movement of population into these areas or the success of adaptation. For, probably, the new inventions or new conditions must not differ too much from the former ones if rapid adaptation is expected.

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